

AMERICA'S BIGGEST INDUSTRY MONTHLY FOR AMERICA'S BIGGEST INDUSTRY

House & Home

DECEMBER 1959

The Manufactured House:
What you can expect to see in 1960

Solid sell!

New solid vinyl is a big talking point ... looks better ... costs less

Install Wonderflor*, the new vinyl tile by Congoleum-Nairn, and you put a lot of extra selling zip into your homes.

This beautiful tile is vinyl right through to the Sure-Grip back—real honest vinyl toughness *all the way*. You can tell prospects this floor will give *twice the wear resistance of service gauge linoleum!*

It's wonderfully comfortable underfoot too: exceptional resilience. Yet it resists indenting by weights up to 150 pounds per square inch! And, of course, it has all of vinyl's easy-cleaning, non-staining features, plus a new buffered smooth-glow finish that is a real long-lasting beauty even under heavy household traffic.

Best of all, Wonderflor costs no more than floor tiles with just a thin layer of vinyl veneer on top—it's backed by the famous, nationally advertised name: Congoleum-Nairn—and is made in today's most popular interior colors. See them all. Write to Builders' Bureau, Congoleum-Nairn Inc., Kearny, N. J.

WONDERFLOR*
solid vinyl tiles



Congoleum-Nairn
FINE FLOORS

©1959 CONGOLEUM-NAIRN INC., KEARNEY, N. J.

*TRADEMARK



NUTONE *Announces...*

BUILT-IN STEREO

+ Intercom + am-fm Radio + High Fidelity Music System



STEREO - ALL THROUGH THE HOUSE . . . not limited to a single room. No costly console cabinets or wasted floor space. Everything Built-In. Fits standard 4" wall studding. Easy to install. Easy to operate.

A sensational new idea for your 1960 homes. The only Built-In Stereo combined with Intercom, am-fm Radio and High Fidelity Music. Never before such luxury . . . at a modest cost which will amaze you.

Be Nutone's Guest

Write to NUTONE, INC.,
Dept. HH-12, Cincinnati 27, Ohio

If you are a Home Builder or Architect — you are invited to our private showing in Chicago at the NAHB Convention January 17 through 20. Mail your reservation today.

- ☐ I wish to attend your private showing in Chicago.
- ☐ Send literature and complete installation data.

SEE
OTHER
SIDE

Another World's First by NuTone!

NuTone

NuTone

World's First
**Electric Ceiling
Heaters**

World's First
**Anodized Hoods
and Fans**

World's First
**Built-In Food
Center**

World's First
**Electronic Door
Chimes**

And Now

NuTone Built-In Stereo!

SEE OTHER SIDE

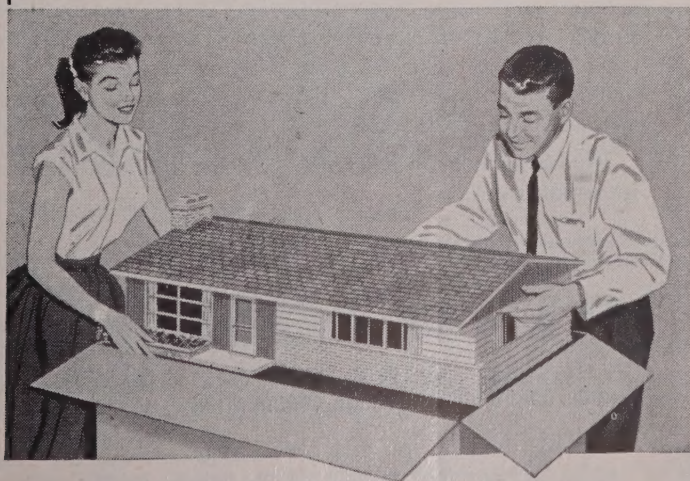
These built-in values*
are setting new sales records
for Manufactured Homes!



***GOOD DESIGN . . .** “custom concepts” in architecture, site application and interior decorating . . . visible evidence of sound planning that says to your prospects, “Beauty. Comfort. Livability!”

***GOOD CONSTRUCTION . . .** “assembly line techniques” . . . all the time and money-saving benefits of modular planning result in better building that says, “A secure investment.”

***GOOD NAMES . . .** names of “known brand” building materials like Celotex, tied in with the brand name of the home manufacturer . . . and the local endorsement of your own name. These good names tell the home buyer, “This is a quality-built home—with quality materials throughout, to assure lasting satisfaction!”



CELOTEX
REG. U.S. PAT. OFF.

**A FAMOUS LINE OF
BETTER BUILDING PRODUCTS**

Pre-Sold Over a Third of a Century!

THE CELOTEX CORPORATION • 120 SOUTH LA SALLE STREET
CHICAGO 3, ILLINOIS



The Image of CF&I offers Clinton Welded Wire Fabric for crack-resistant, long-lasting concrete structures

The CF&I giant stands for the strength and dependability of all the steel products which we make for the construction industry. One of these—CF&I-Clinton Welded Wire Fabric—is used by builders to reinforce concrete with the extra strength of steel.

CF&I-Clinton Welded Wire Fabric minimizes cracking during the setting period. And the steel fabric helps prevent cracking from extreme temperature changes, assuring years of trouble-free maintenance.

CF&I-Clinton Welded Wire Fabric is specified by

architects because it's so easy to use. The flexible mesh unrolls quickly and stays flat . . . it can be shaped quickly on the spot. On your next job, make sure that you strengthen the concrete with CF&I-Clinton Welded Wire Fabric. It's available in a complete range of gages and mesh sizes for patios, garage floors, basements and driveways—in fact any "light construction" concrete structural requirement.

Phone our nearby sales office for cost and fast delivery information.

6756

FREE! Send for new 32-page catalog, "CF&I Steel Products for the Construction Industry".

when they ask...

"is it Reinforced"

say yes... with

CLINTON
WELDED WIRE FABRIC
THE COLORADO FUEL AND IRON CORPORATION



In the West: THE COLORADO FUEL AND IRON CORPORATION—Albuquerque • Amarillo • Billings • Boise • Butte • Denver • El Paso • Ft. Worth • Houston • Kansas City • Lincoln
Los Angeles • Oakland • Oklahoma City • Phoenix • Portland • Pueblo • Salt Lake City • San Francisco • San Leandro • Seattle • Spokane • Wichita
In the East: WICKWIRE SPENCER STEEL DIVISION—Atlanta • Boston • Buffalo • Chicago • Detroit • New Orleans • New York • Philadelphia
CF&I OFFICE IN CANADA: Montreal • CANADIAN REPRESENTATIVES AT: Calgary • Edmonton • Vancouver • Winnipeg

HERE IT IS...THE BIGGEST NEW SALES FEATURE IN BUILT-IN ELECTRIC RANGES

Beautiful new Kelvinators with... **THROW-AWAY OVEN LININGS**



*Now You Can Offer in Your Homes What Every Woman Wants . . .
An End to Oven Cleaning Drudgery!*



INSTALLATION'S EASIER WITH KELVINATOR!

- No Clamps, Toggles, Brackets! Just 4 screws secure the range top, and 4 secure the oven!
- No Separate "Picture Frame"! Full-width door covers cabinet!
- Just One Electrical Connection required for surface units!
- Just 3 7/16" Depth required below range top!
- Range Top Fits Single Rectangular Cut-Out in counter!
- Roughing-In Dimensions: Range Top—28 1/4" wide, 19 3/4" front to rear, 3 1/4" Depth Below Counter. Oven—21 1/2" wide, 25 3/4" high, at least 23 3/8" depth into wall.

Just ask your wife (or any woman) . . . she'll tell you scrubbing an oven of grease and grime is one of the messiest, dirtiest jobs in the kitchen. That's why the exclusive new Throw-Away Aluminum Oven Linings in every Kelvinator Built-In Electric Range give you such a tremendous sales advantage!

With Kelvinator, you don't just offer easier oven cleaning, but elimination of *all* the drudgery . . . with foil linings protecting top, bottom, back and both sides of the oven! There's even foil under the range top to catch splatters and spill-overs!

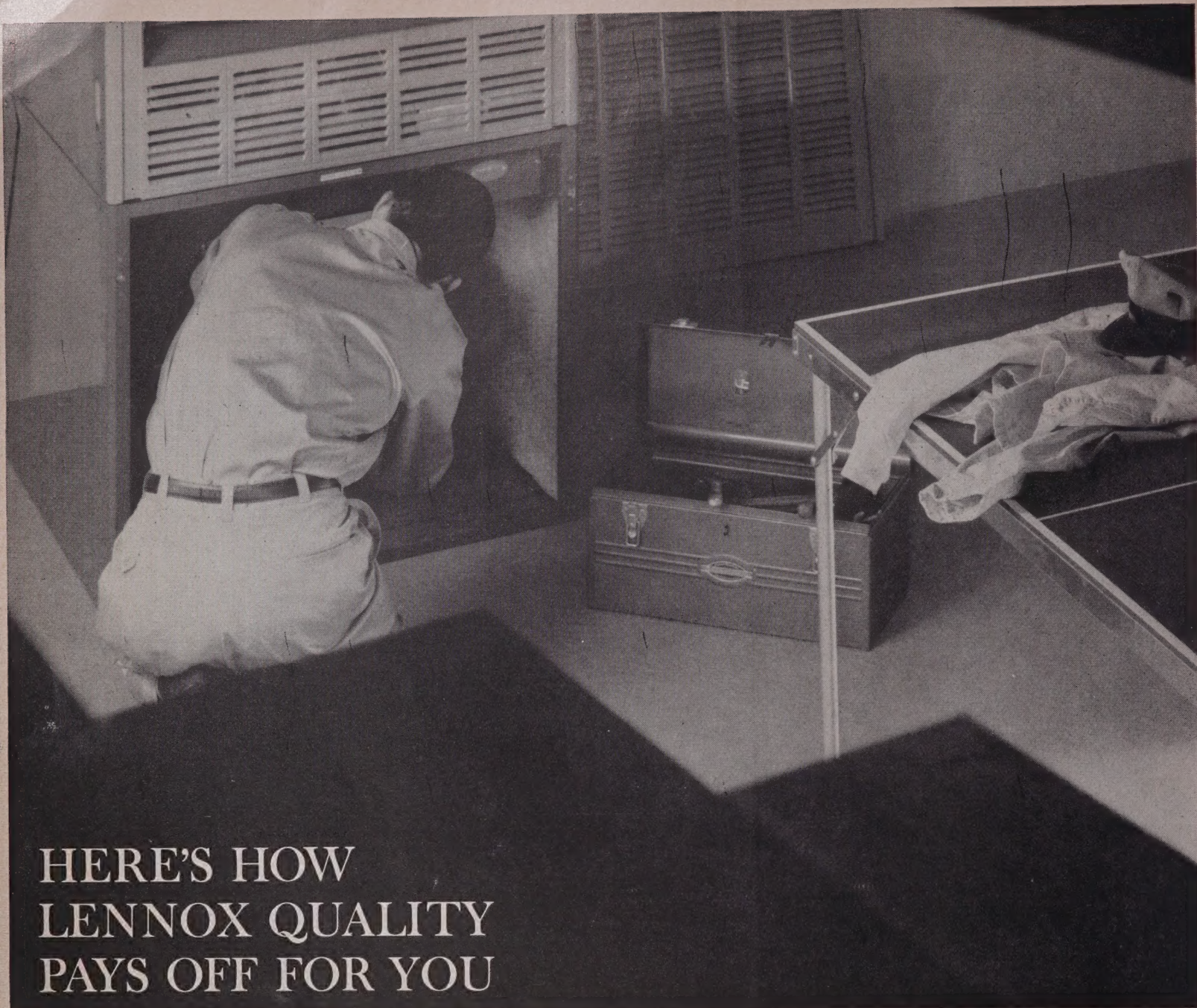
Women are sure to like these Kelvinator advances, too: easiest-to-set automatic timer; new silent-action, drop-down door; multi-heat rotisserie . . . and the beautiful contemporary styling in brushed chrome or porcelain finishes of Bermuda Pink, Aztec Copper, Surf Turquoise, and Buttercup Yellow.

Get the complete story about these exciting new Kelvinator built-ins. Write or wire for full details today.

Kelvinator Appliances

KELVINATOR DIVISION, AMERICAN MOTORS CORP., DETROIT 32, MICHIGAN

Refrigerators • Ranges • Automatic Washers • Clothes Dryers • Home Freezers • Room Air Conditioners



HERE'S HOW LENNOX QUALITY PAYS OFF FOR YOU

Lennox dealers follow up each installation with a meticulous adjustment program to assure accurate, trouble-free operation.

The responsibility of your local Lennox Comfort Craftsman does not end with the sale of your homes. After buyers move in, he returns to test the actual performance of the heating and air conditioning units he has installed. He makes whatever adjustments are necessary, handles whatever servicing is required—to assure 100% trouble-free operation. Buyers are kept happier; you're not bothered by annoying complaints and call-backs.

Lennox quality works for you in other ways, too! For example: Your local Lennox Comfort Craftsman (who's engineer-trained) deals directly with a nearby

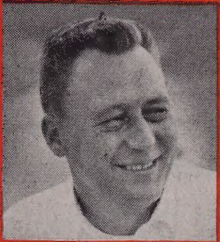
factory. He's always on the job at the right time with the right equipment. He offers the world's largest line of heating and air conditioning equipment plus the selling power of the Lennox name: most widely known, most widely advertised, most widely preferred of all makes in home heating and air conditioning.

Get facts on the Lennox merchandising program, which includes professionally planned advertising materials, in-home displays, personalized builder brochures and billboards. For sample merchandising aids, write Lennox, Marshalltown, Iowa.

LENNOX

*World leader in indoor comfort
for homes, business, schools*





DALE FORSBERG
Minot, North Dakota



ANDY PLACE
South Bend, Indiana



BOB CLARK
San Rafael, California



DAN NARODICK
Seattle, Washington

These 4 builders show

16 ways
to build more
house for the
money with
DFPA-QUALITY TRADEMARKED
FIR PLYWOOD



4 BUILDERS SHOW
15 WAYS TO BUILD
MORE HOUSE
FOR THE MONEY



Plywood construction = savings of over



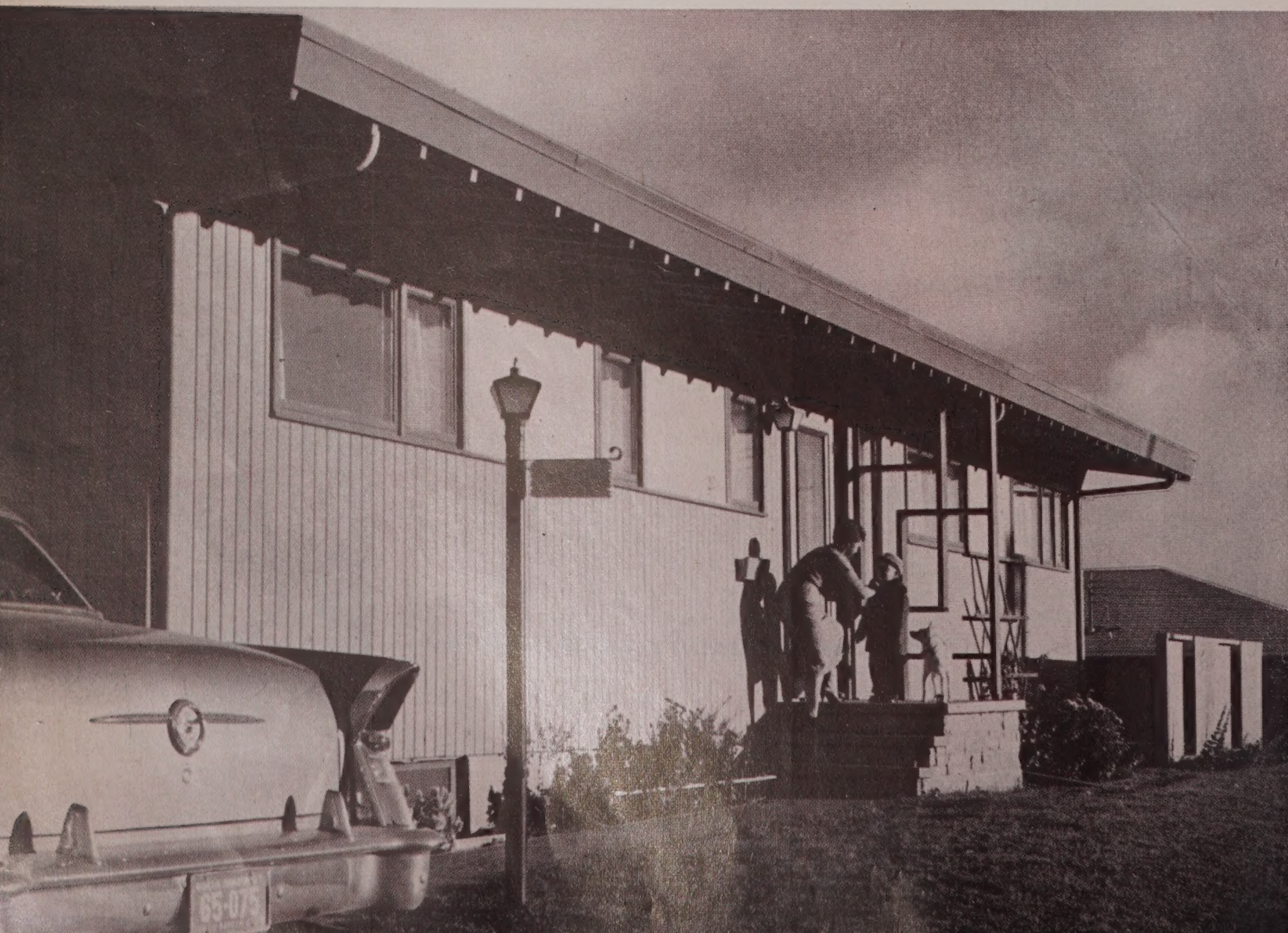
DALE FORSBERG
Minot, North Dakota

"We use plywood wherever we can. It's a real cost-cutter. Customers like it, too. Sales are up. Complaints down."

Time is money for Dale Forsberg of Minot, North Dakota. That's why he uses virtually all-plywood construction in 80-100 homes he builds per year in the \$17,000-23,000 price range. Plywood builds a better quality home, yet by capitalizing on its labor-saving advantages and using it to do two jobs in one operation—like siding-sheathing and subfloor-underlayment—he saves \$888 per house. Savings are passed on to home buyers in the form of extras giving the builder a competitive sales edge. Homes are often sold before the foundations are poured.

Every phase of the Forsberg operation is carefully planned and scheduled using specialized crews who rotate from house to house. Here is how cost savings with plywood break down on a typical unit.

1. 3/8" PlyScord® roof sheathing	\$202.00
2. Leaving plywood roof deck and rafters exposed at the eaves	126.00
3. Exterior plywood siding applied to studs without sheathing	275.00
4. 2•4•1 plywood subfloor-underlay with spline joint	225.00
...plus additional savings in overhead because plywood saves 10 days construction time per house	60.00
Total: \$888.00	



+ careful work schedules

\$800 per house for Forsberg, Inc.

1

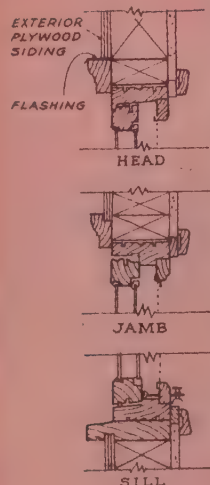
PlyScord® sheathing halves labor, forms solid deck for built-up roof

Forsberg uses PlyScord grade plywood roof decks for built-up roofing—at a savings of \$202 per house over the cost of boards. The plywood goes down much faster, forms a stronger, tighter deck for the finish roofing. It requires less nailing and fitting; cuts down on waste. Panels $\frac{3}{8}$ "-thick are used over rafters spaced 16" o.c.

2

Smooth underside of plywood deck is exposed, eliminating soffits

Simply by leaving rafters exposed at the eaves, Forsberg saves another \$126 by eliminating both time and materials required to install soffits. He says this is possible because the painted underside of the plywood roof deck is attractive "as is" without boxing-in. He uses A-C grade Exterior plywood, good face down, for all parts of the roof deck exposed to the weather.



3

Single thickness of Exterior plywood serves as both siding and sheathing

Conventional wall sheathing is completely eliminated by applying either Texture One-Eleven® (vertical grooved panels) or $\frac{1}{2}$ " Exterior plywood and battens directly to the studding. Savings: \$275 per house. Plywood combined siding-sheathing has ample bracing strength and meets FHA requirements.

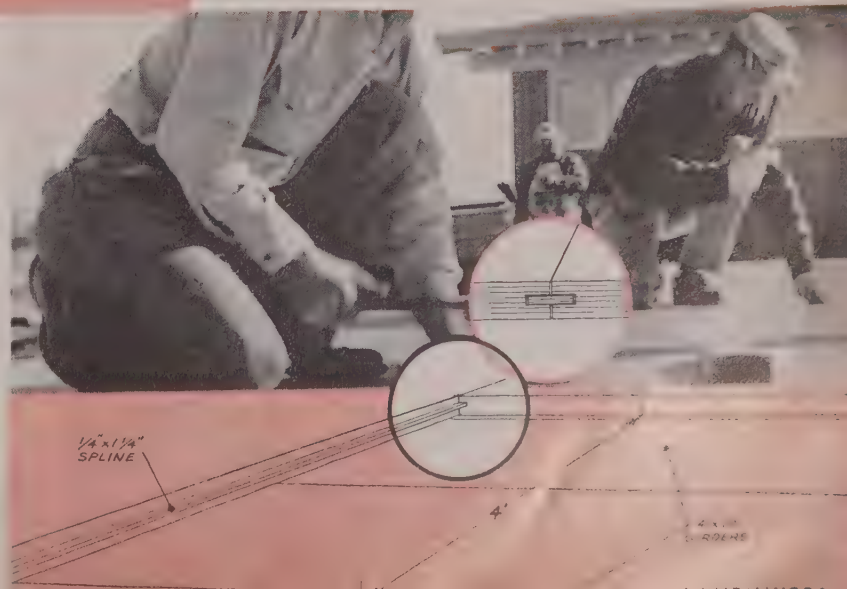
Look for the DFPA-quality trademark on all plywood you buy

4

New idea in floor construction uses 2·4·1® plywood with a spline joint

Savings of \$225 per house are made by using 2·4·1 (1 $\frac{1}{8}$ "-thick combined subfloor-underlay panels) over girders on 4-foot centers, using splines instead of 2x4s to support panel edges. The system saves time and materials, eliminates need for additional underlayment for resilient flooring. It presents an attractive and uncluttered basement ceiling highly popular with buyers.

For more information about plywood sheathing, siding or subflooring, write Douglas Fir Plywood Association, Tacoma 2, Washington.



BUILDERS SHOW
WAYS TO BUILD
MORE HOUSE
FOR THE MONEY

You'll be using factory like these

NAHB South Bend Research House shows 4 ideas for tomorrow's house you can use today



The South Bend Research House was sponsored by NAHB Research Institute to investigate new ways to build better for less. It was built by Andy Place (above), Place & Co., Inc., South Bend. Consulting Architect: Herman York. Both also serve as Research Institute trustees. Coordinating work for the NAHB Research Institute: Ralph Johnson, director and John M. King, assistant director.

5

Stressed-skin roof panels made of DFPA-quality trademarked fir plywood and foamed styrene were installed in less than 2 hours. They combine the function of rafters, roof deck, insulation and finish ceiling in one easily handled component that replaces the many hand fitted layers of a conventional roof and ceiling. Panels (each 4 x 18 ft. and weighing only 190 lbs.) extend from ridge to eave and are joined with splines so that the plywood facings butt to each other. Strength is provided by the $\frac{1}{4}$ " fir plywood top and bottom, with foam plastic used for insulation and as a spacer between the skins.

Look for the DFPA-quality trademark on all plywood you buy

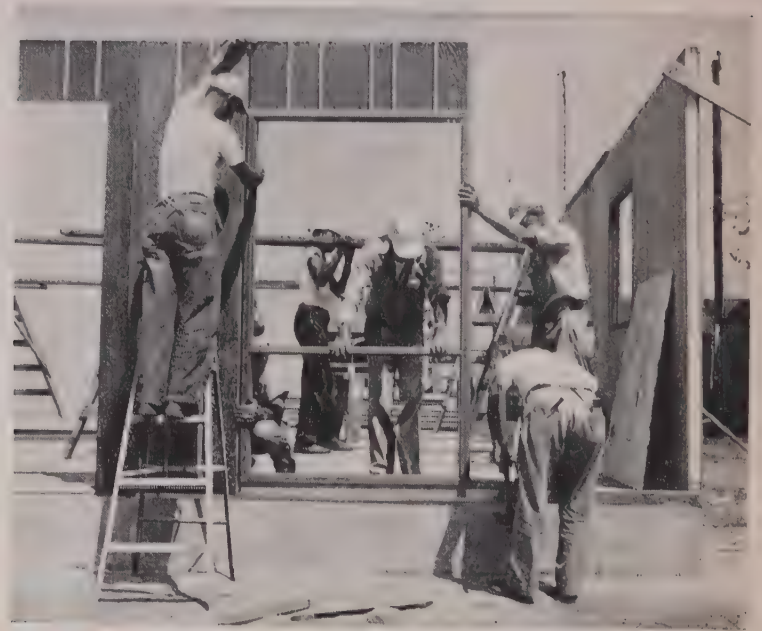


made fir plywood components sooner than you think



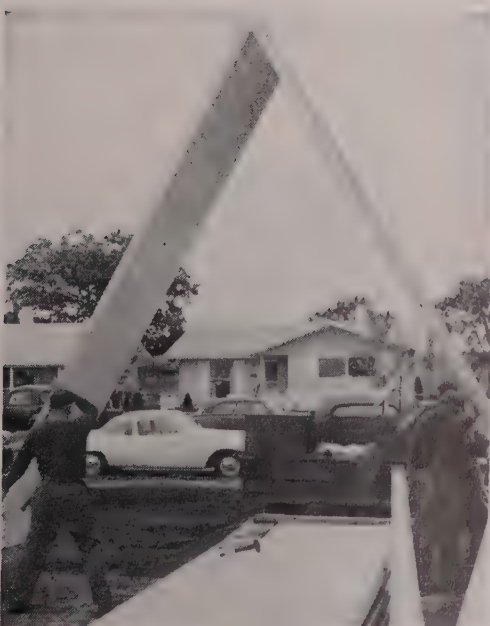
6

Plywood box beams act as the main roof support, have $\frac{3}{8}$ " fir plywood skins nail-glued to 2x4 top and bottom chords and stiffeners. Projecting (or recessed) end stiffeners form tongue and groove joints over bearing partitions. Advantages of fir plywood box beams include high strength-weight ratio, design freedom, dimensional stability, easy-to-finish surfaces.



7

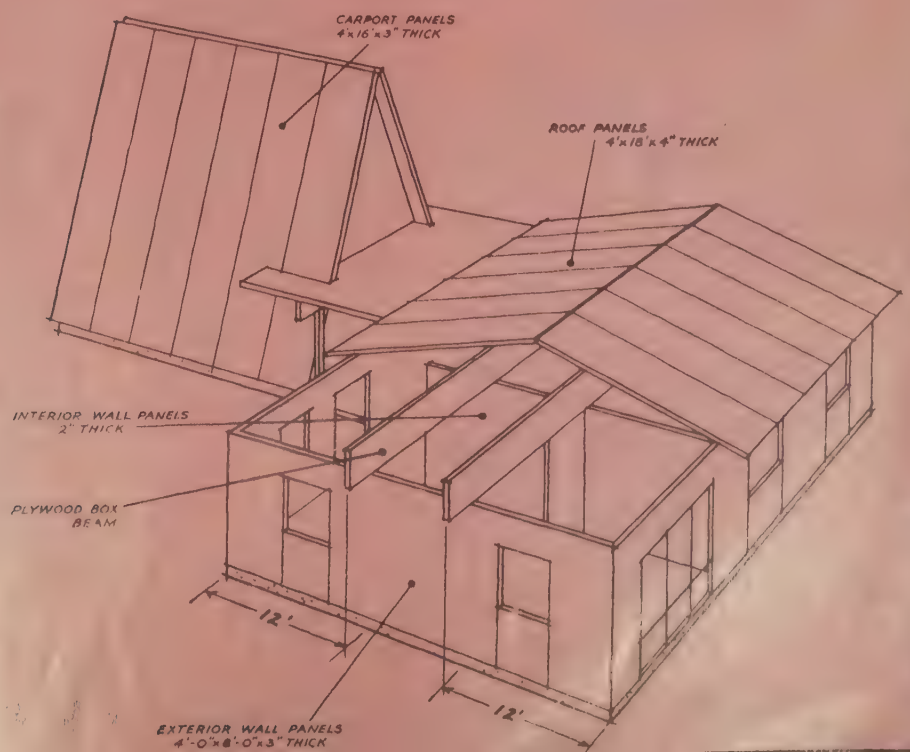
Exterior wall panels were erected in 3 hours, 20 minutes. Outer face is $\frac{1}{2}$ " "brushed grain" plywood with inset redwood battens; inner face is $\frac{1}{4}$ " fir plywood. Foamed styrene core gives panel a total thickness of $2\frac{3}{4}$ " and a "U" value of 0.1. The individual panels are tied together with splines and a continuous top plate shaped to conform to roof pitch.



8

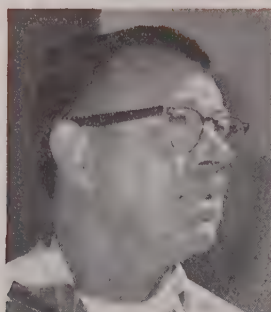
Carport, built by hinging foam-core fir plywood panels together prior to erection, cost some \$400 less than conventional semi-enclosed carport. It demonstrates cost-cutting advantages of components as well as new building forms they make possible.

Cutaway shows how plywood components permit house to be assembled with relatively few big parts, rather than built with countless small pieces.



BUILDERS SHOW
50 WAYS TO BUILD
MORE HOUSE
FOR THE MONEY

The extra quality of Builder Bob Clark



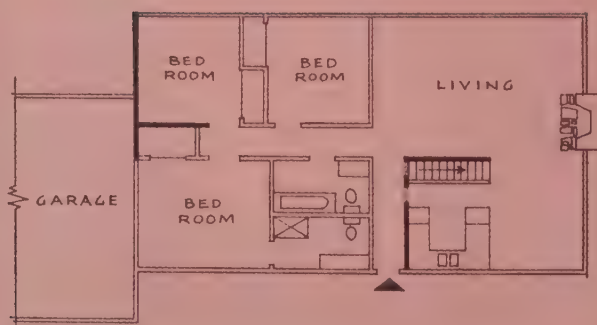
BOB CLARK
San Rafael, California

"Solid basic construction is a 'must' in \$30,000 homes. To us that means DFPA plywood. It's the best money can buy."

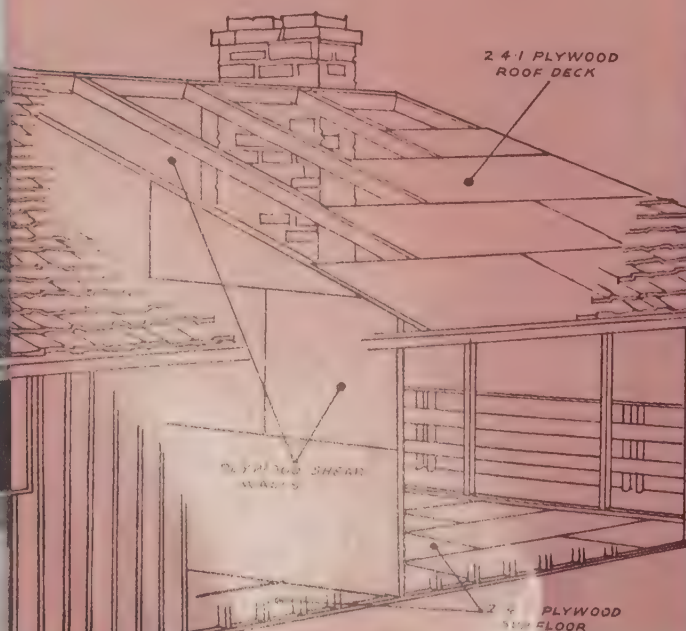
Bob Clark has found today's second-time home buyers a lot more sophisticated about basic structural materials—especially with 2-level homes perched on steep lots in Northern California's earthquake territory. Plywood's extra strength can be just as important as good design, or a spectacular view—all of which are featured in Clark's semi-custom Madera Gardens homes in Corte Madera. He describes his homes structurally as good looking reinforced plywood boxes that can't wrack or twist.

Clark's homes contain over 2,000 square feet and range in price from \$23,500 to \$30,000—or about \$11 a square foot, lot included. Plywood saves about \$200 per house, largely due to lower installation costs.

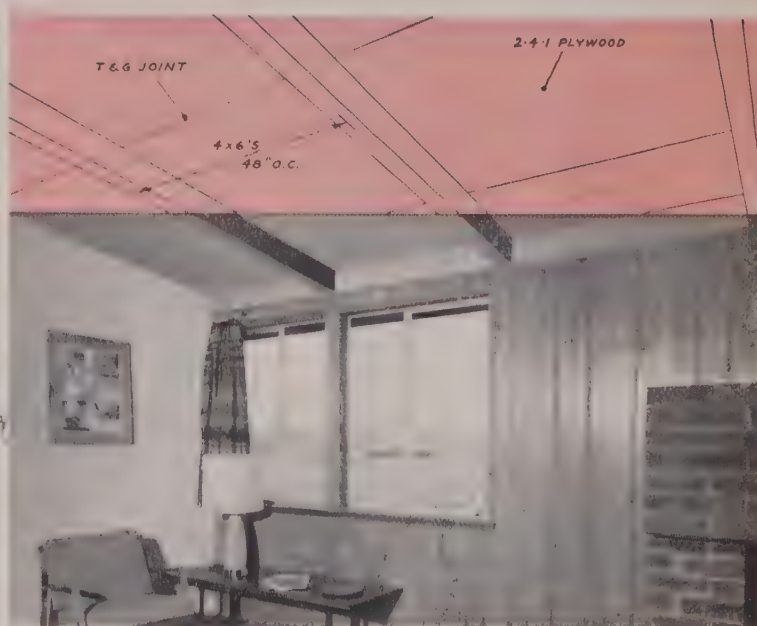
For more information about fir plywood structural applications, write Douglas Fir Plywood Association, Tacoma 2, Washington.



Typical upper level floor plan. Heavy lines show location of plywood shear walls.

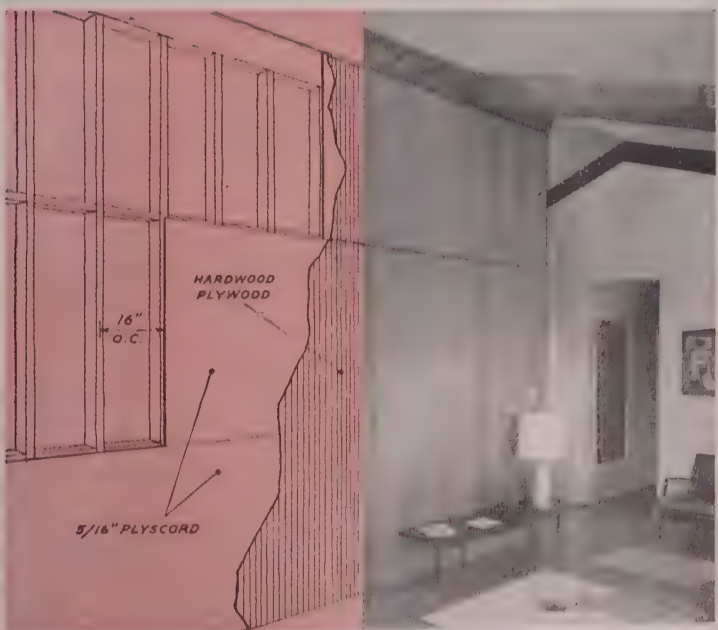


fir plywood construction helps sell the upper-income market



9 **2-4-1 Subflooring** is used for both oak-strip covered main level and semi-finished basement. The 1 1/8" thick panels are laid over beams 48" o.c. Panel edges are tongue and grooved to eliminate blocking. Clark, who switched from 2 x 6 car decking, reports plywood is superior structurally and costs about \$100 less installed.

10 **2-4-1 Roof decking** is basically a modification of the floor system. Panels serve as both roof sheathing and finish ceiling. Panel edges between beams are tongue and grooved, with eased edges. As with subflooring, the in-place cost of plywood construction comes to \$100 less than car decking; material costs are the same, but plywood can be installed in half the time.



11 **Plywood shear walls** eliminate bracing on all other walls and permit use of large glass areas on the view side. Used in pairs (see floor plan), they work with the horizontal plywood floor and roof diaphragms in resisting high wind or earthquake loads. At least one shear wall on every home is continuous from foundation to roof.

12 **Texture one-eleven** is used either as the basic side wall covering or as an accent for other materials. Panels are applied directly to the studding without sheathing and are given two coats of a heavily pigmented shake and shingle stain. In the house above Texture One-Eleven is used on the upper level carport to relate it visually to the main structure.

BUILDERS SHOW
WAYS TO BUILD
MORE HOUSE
FOR THE MONEY

How one tract builder —and saves \$300

13

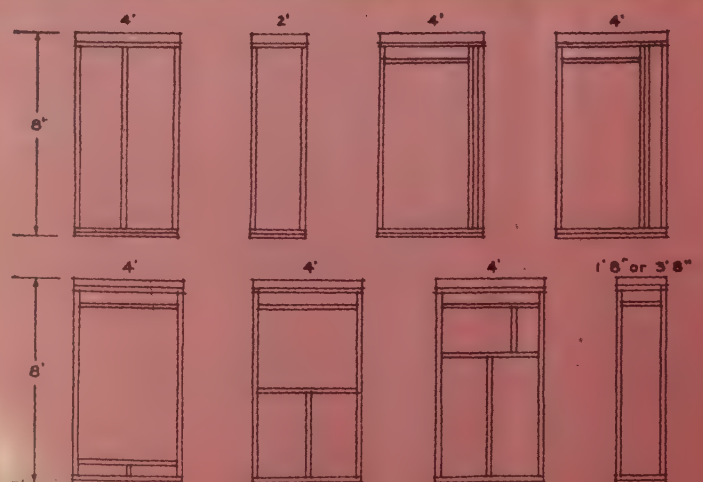
Pre-fab plywood wall sections for the 1,000 sq. ft. houses being built by Hebb and Narodick are installed in an average of 45 minutes. The components are tipped into place, butted and nailed together. A continuous double 2 x 6 header ties the sections together.

Hebb and Narodick buy the Lu-Re-Co components from Blackstock Lumber Co., Seattle, who make deliveries to meet work schedules. Construction is completed in 30 days or less in contrast to the 6-8 weeks formerly required.

The Hebb and Narodick homes are a modified version of the "Madison", one of the new "Emblem" homes designed by DFPA for either Lu-Re-Co or conventional construction. For more information write Douglas Fir Plywood Association, Tacoma 2, Washington.



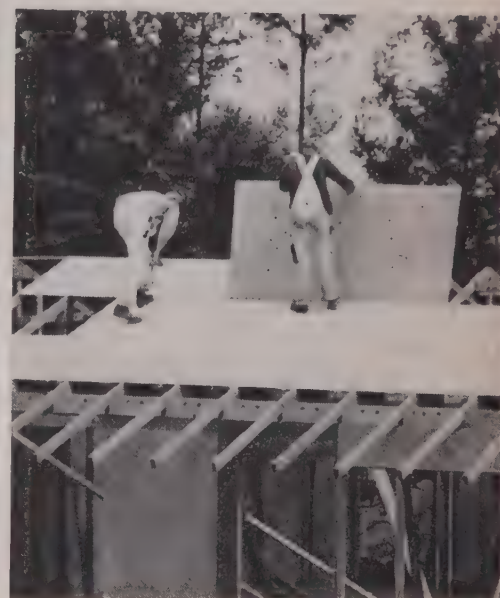
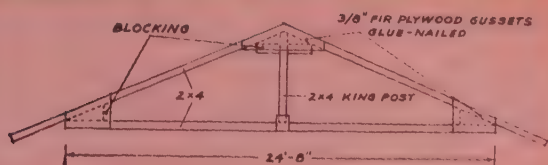
Hebb and Narodick, Seattle, Wash., have just completed one 41-home tract using Lu-Re-Co plywood components, and are using them on another 106-home tract just getting under way. Dan Narodick (above) is partner in charge of the projects. Al Curran is superintendent.



8 basic panels are used, with $\frac{3}{8}$ " PlyScord® sheathing over 2 x 4s, 24" o.c. Window frames are installed by fabricator. Sections rest on $\frac{3}{4}$ " fir plywood sole plate and are tied together by a continuous double 2 x 6 header.

uses Lu-Re-Co plywood components per house in labor costs alone

Roof construction is fast and easy with plywood sheathing over pre-fab trusses and gable ends



14

Kingpost trusses eliminate load bearing partitions, save 16 man hours per house. Two men take less than 4 hours to install the 24 trusses used on each house. Nail-glued fir plywood gusset plates fasten truss members securely... provide added stiffness and rigidity.

15

Pre-fab gable ends are installed by a two-man crew in 20 minutes—compared to four hours required for piece-by-piece construction on the job. Units are basically kingpost trusses covered with $\frac{3}{8}$ " Exterior fir plywood and battens.

16

PlyScord® roof sheathing takes between one third and half the time required to do the job with boards or shiplap. Panels, $\frac{1}{2}$ " thick, are applied over trusses on 2-foot centers. Plywood sheathing saves on nailing, reduces waste, provides superior lateral rigidity.

WE URGE YOU TO SPECIFY ONLY DFPA TRADEMARKED PLYWOOD because...

The DFPA-industry quality control program assures satisfactory performance of the plywood you buy.

DFPA conducts product research and development to give you the best material for the job—and up-to-date information about how to use it.

DFPA works with building codes to clear any road blocks which might prevent you from using plywood to best advantage.

DFPA national advertising programs help pre-sell your customers on plywood construction, as well as enlarge the new home market.

In view of these activities in your behalf, we again urge that you buy only DFPA-trademarked plywood.

DOUGLAS FIR PLYWOOD ASSOCIATION, TACOMA, WASHINGTON
—a non-profit industry organization devoted to research, promotion and quality control



Since 1934, the DFPA-industry quality control program has served customers and specifiers by providing unbiased and authoritative certification of fir plywood quality.

Only plywood which bears the DFPA trademark is manufactured under the industry-wide Douglas Fir Plywood Association quality control program. Always look for the letters "DFPA"

For 1960, Kingsberry Homes
presents a Revolutionary
New Profit Opportunity—to a
few Southern Builders who will

ACT NOW!

THE KINGSBERRY MARKET

● Here is news—news you never heard before—news you've been waiting for—and it comes to you from the fastest growing Manufactured Home Builder in the South—a company whose new line of homes—the Kingsberry—has doubled and re-doubled its sales in the past two years. Read here what it will do for you.

Within the next few weeks Kingsberry Homes will release the most revolutionary plan ever developed for breaking the building log jam in the South—truly a “market buster.” It presents an exceptional opportunity to a few builders who mean business, have land ready to go—and who will aggressively follow a program that has *already proved* its sales and profit return. Here are some of the highlights—

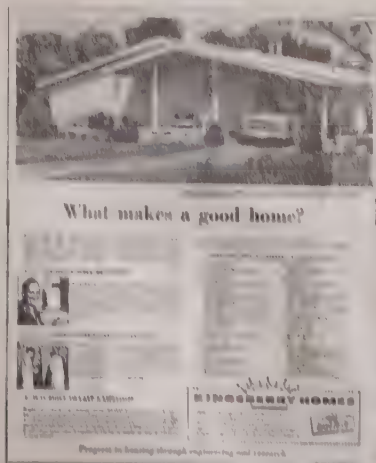
1 This program is built around *you* and *your development*—featuring Kingsberry-paid advertising (in 4-color where obtainable), throughout the early Spring selling season. It will be rolling full steam in March and will be climaxed in May by a sensational new Kingsberry Home of nation-wide importance.

2 With the Kingsberry unique Profit Control Program, you can build *more* units next year on the *same* investment with *smaller* overhead and with a *smaller* organization. You can confidently look forward to lower costs, reduced bookkeeping and simplified purchasing.

3 *Reduced prices!* Kingsberry made news in '59 with an average price reduction of 5% while upping quality, in a year of sharply rising prices. For 1960 we are able to offer a further reduction of 2% plus new savings on job site construction of another 3%—while cutting your conventional construction time in half.

You are in the spotlight:
this is the kind of Kingsberry-paid advertising that goes with the market-busting program. This one 4-color advertisement resulted in hundreds of calls in the first 48 hours—to the Alabama builder-dealers listed in this ad. You, too, can be spotlighted in ads like these. Coupon will bring details.

**Join the Kingsberry
Market Busters—
capture more of your
market in 1960**




**KINGSBERRY
HOMES**

formerly Lumber Fabricators, Inc. of Fort Payne, Alabama

At present Kingsberry can serve builders only in the following states: Kentucky, Tennessee, North and South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana.





Gracious and spacious, too—1200 sq. ft. of unbeatable Kingsberry value at a completed construction cost of about \$10,500 for brick (\$750 less for frame construction) without land
 Chart at right shows phenomenal increase in sales of Kingsberry Homes in the last 2 years

BUSTER PROGRAM *and what it will do for YOU*

4 Kingsberry has the answer to today's financing problems. New product advantages and the Kingsberry program enable you to build more, at more net profit in 1960. This program includes construction financing, special model home financing, even model home furnishings financing.

5 Kingsberry will show you—for 1960—the newest home packages, covering the great range in sizes and prices possible only with Kingsberry's architectural and manufacturing resources.

6 Kingsberry Homes are the most flexible manufactured homes you ever worked with—offering so many easy and economical variations that they have that "custom look." The exclusive designs of Architects Herman York of New York City and Henry Norris of Atlanta—men who know what Southerners want.

7 Kingsberry offers the industry's most generous cash contribution to your local advertising program,

enabling you to be the big-name builder in your market.

8 You will have the tested-and-proved Kingsberry "News-Maker" advertising program for your continued local use—and the new Kingsberry "Sales-Maker" merchandising program to help you efficiently turn traffic into sales.

9 You will benefit by national publicity in leading magazines—such as the full-color feature stories that appear this year in "Good Housekeeping" and "Living for Young Homemakers." There's more to come in 1960. *Kingsberry Homes are news everywhere!*

10 You benefit by Kingsberry's highly automated production, that assures better units—walls, floors, roof, trusses—and unique, "packaged" bathrooms and kitchen assemblies. Also "optionals" in heating and kitchen equipment that save money for your customers. Kingsberry Quality Control every step of the way assures construction that is superior to "on-the-site."

And much, much more—for full story, Air Mail coupon TODAY!

THIS IS URGENT. You cannot realize the full profit potential of this program unless you get in on the beginning of our 1960 Market Buster activity.

KINGSBERRY HOMES, Fort Payne, Alabama

Without obligation, please have your representative call with full information about the 1960 KINGSBERRY MARKET BUSTER PROGRAM—and show me how it fits into my present operation. (Please check your interest and fill in number)

- ☐ I have _____ lots ready to build on. ☐ I have _____ lots being developed
☐ I have _____ acres on which I need development financing
☐ I am interested in construction financing
☐ I am interested in model home furnishings financing

Your name _____

Firm name _____

Street _____

City _____

Zone _____

State _____

Circle 100-1

"Within a few years any house that is not air-conditioned will be obsolescent,"
says Federal Housing Administration



SUN VALLEY* All-Year[®] Gas Air-Conditioner dramatizes newness, lasting value.
It heats in winter...cools in summer...saves money with low-cost Gas

Housing authorities recognize the growing trend to air conditioning. Today it's one of the best ways to clinch the sale of a new house, one of the most convincing arguments against competition of older homes on the market.

The Arkla-Servel Sun Valley offers many advantages to the builder as well as to the buyer:

1. Show customer how, from a single compact unit, the Sun Valley heats the whole house in winter, cools it in summer, circulates clean, filtered air at all times.


2. Demonstrate its ease of use. Show prospects how the temperature of the entire house is regulated from a single thermostat.

3. Explain to home buyers that because the Sun Valley works with Gas, there are no worries about fuel deliveries. You can tell them, too, that modern Gas is the clean, economical, most dependable fuel.

4. Show them the five-year warranty, real assurance to the home buyer of long life and low-cost maintenance.

Make sure your new homes *stay* new. Contact your Gas company or Arkla-Servel dealer now. Units available in models and sizes to fit any home.

AMERICAN GAS ASSOCIATION

ONLY GAS  **does so much more...for so much less!**

*Trademark. Product of Arkla Air Conditioning Corp., General Sales Offices, Little Rock, Arkansas.



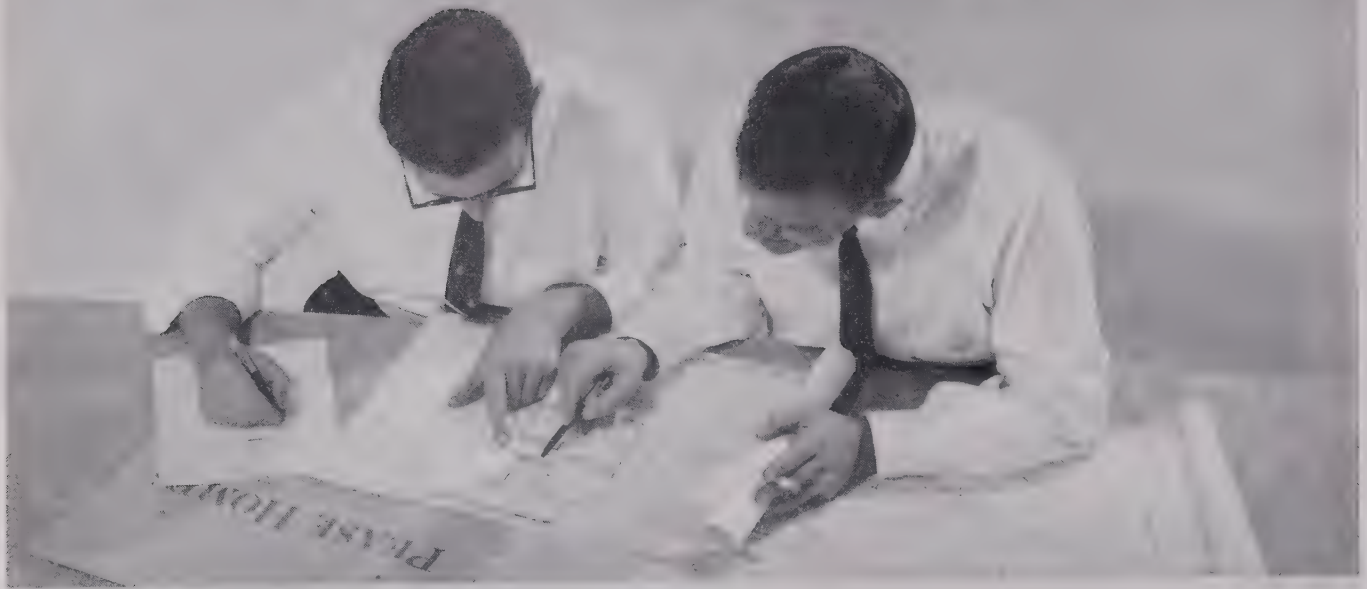
Look at this striking new pattern by St. Regis Panelyte, America's style leader in decorative laminates. Can you imagine a more appealing surface for counter tops, sink tops, interior walls and vanities? **NEW PANELYTE "GOLDEN WISP" BELONGS IN THE HOMES YOU BUILD.** For features like this can help you sell more homes. Panelyte is so practical, too. Lasts a housetime with the easiest upkeep. And "Golden Wisp" is just one of countless patterns from our complete, colorful line.



May we send you free samples of color-coordinated Panelyte? Write Panelyte

Regis Paper Company, 150 East 42nd St., New York 17, New York.

home plans that sell



sales plans to sell them



It's easier to convert F.H.A. approved land inventory to profits with quality Pease Homes, because we offer you *everything* you need to succeed! Our sound program starts with *Customized Architectural Service* to develop with you the homes best suited to your market . . . you are assured *home plans that sell*.

But that is just the beginning, because Pease Homes offers you a proved, comprehensive plan to close sales:

- *Complete F.H.A. Processing and Financing Service*, including securing F.H.A. conditional commitments, construction money and mortgage loans.
- *Personalized Model Home Merchandising and Promotion*, a complete package of advertising aid, keyed to your locale, plus display material and professional advertising assistance.

PEASE HOMES

and Building Materials

For more information, write or phone William Stricker, General Sales Manager, and arrange for a sales representative to call. Pease Woodwork Company, 937 Forest Avenue, Hamilton, Ohio.



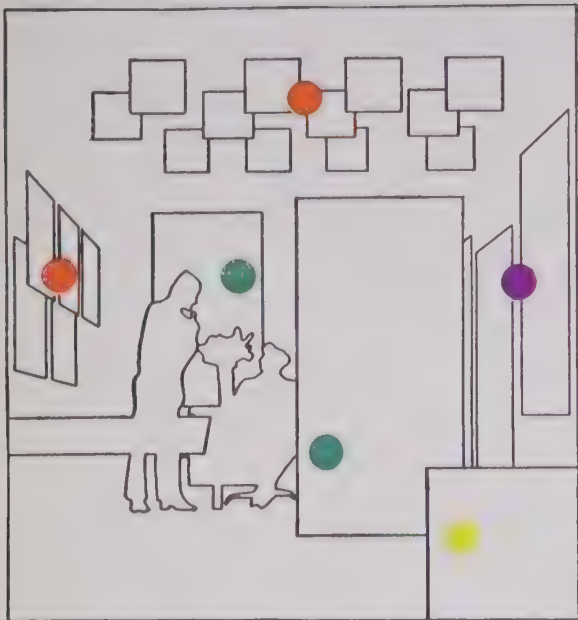
Beauty...fidelity...utility: the sales appeal of



GLASS BY AMERICAN-SAINT GOBAIN

There's excitement to architectural glass. People recognize its ability to introduce color, light and space into their indoor lives. These are among the most wanted of amenities. The architect and decorator, too, find glass today's most versatile medium for space design and environmental control. And its permanence, its economy of installation and maintenance are hard to match.

• American-Saint Gobain offers you the most complete line of architectural glass . . . a huge fund of distinctive building and decorating ideas. It's designed and produced by the company with the finest facilities . . . the longest experience in glass. • American-Saint Gobain Corporation.



FOUR SAMPLES . . . FROM THE BROAD SPECTRUM OF AMERICAN-SAINT GOBAIN . . . are shown above and on the reverse, to suggest to you the endless merchandising possibilities in *Glass by American-Saint Gobain*. This most desired of materials adds value—far exceeding its cost—to any building or decorating scheme. All the types and characteristics listed below . . . and combinations thereof . . . in the widest range of sizes and thicknesses . . . are now available from *American-Saint Gobain*.

TRANSPARENCIES: window glass; crystal sheet; obscure and light-diffusing; opaque.

FINISHES: textured; Satinol[®]; frosted.

PATTERNS: a wide variety of decorative patterns: linear, geometric, random and non-directional; corrugated.

PROCESSES: heat tempered; laminated; wired.

FABRICATIONS: spandrels; doors; resistance heaters; plane and bent shapes

SPECIAL CHARACTERISTICS: heat-absorbing; glare-reducing; insulating; fire retarding; chemical resisting.

COLORS: integral tints; fused ceramic coatings.

For information or service, check the Yellow Pages for the address of your local independent glass jobber . . . or our district office nearest you.

AMERICAN-SAINT GOBAIN CORPORATION
Dept. III12, 625 Madison Ave., N. Y. 22



AMERICAN LUSTRAGRAY[®]
gray-tinted window glass

Reduces glare approximately 50% without sacrificing vision. Exterior opacity contributes to privacy. Neutral shade places no restrictions on interior decor. No special glazing requirements. Thicknesses: double strength . . . $\frac{3}{16}$ " . . . $\frac{7}{32}$ " . . . $\frac{1}{4}$ ".



BLUE RIDGE HUEWHITE[®]
glare reducing glass

For light diffusion with true color transmission. Designed for light control and/or decoration, in day lighting of schools, offices, studios, museums and similar installations. Delivers very wide light distribution—almost uniform down to incidence of 15 degrees. Thicknesses: $\frac{1}{4}$ " . . . $\frac{3}{4}$ ". Also: $\frac{1}{4}$ " wired . . . $\frac{3}{8}$ " corrugated.



BLUE RIDGE BEADEX[®]
new patterned glass

Newly styled for sparkling decorative effects. A striking design for partitions and space dividers. Plain and textured finishes. Thickness: $\frac{3}{32}$ ".



BLUE RIDGE HUETEX[®]
colored, insulating glass facing

The most durable of spandrel materials. Fully tempered glass, $\frac{3}{16}$ " thick, textured on the weathering side to subdue reflections . . . sunfast ceramic enamel, in 12 standard colors (or custom-made to your sample), permanently fused to back of glass . . . aluminum, welded to the back surface by exclusive process, to protect enamel, and insulate. Will not fade, craze, crack or warp.



AMERICAN-SAINT GOBAIN



ADD *Extra* APPEAL
TO YOUR HOMES...

with *Quality-Assured* DELCO FURNACES

COMPACT, TOTALLY ENCASED UNITS

adapt ideally to attractive closet installations saving your customers valuable floor space, and of course...

A NATIONAL BRAND PRODUCT,

advertised and distributed coast-to-coast, is more readily accepted by your customers, plus...

A NATIONAL FRANCHISED DEALER

ORGANIZATION staffed with personnel factory-trained in latest installation and service methods together with...

AN ENGINEERED LAYOUT SERVICE

that assures you the most efficient size unit for even heating throughout every home, and...

BACKED BY GENERAL MOTORS REPUTATION

a world-renowned name for quality products.
You'll do better with Delco Furnaces.



Take advantage of national brand product acceptance. Eliminate any uncertainty about comfort in your homes

in any climate by using GENERAL MOTORS-DELCO HEATING AND AIR CONDITIONING. Write, wire or phone for more details.

DELCO
APPLIANCE DIVISION

Rochester 1, New York

GENERAL MOTORS CORPORATION



The difference between this is often **USS** American Welded Wire

WHEN you use USS American Welded Wire Fabric for all concrete areas for the homes you build, you give them a definite sales advantage over houses without this important quality feature. Walks, patios, driveways and basement slabs will wear better, look better, and last longer when they're reinforced with USS American Welded Wire Fabric. And your customers know this . . . they know to ask before they buy "is it reinforced?"

Put this sales-pulling advantage to work for you. Use USS American Welded Wire Fabric in all your concrete work. Tell your prospects it costs only about a penny a day on

the mortgage life to insure protection and appearance of concrete around the average home . . . that reinforced concrete will be in good condition even after the mortgage is paid. USS American Welded Wire Fabric adds 30% to the strength of concrete. It is made of cold-drawn steel wire and is prefabricated for quick, easy installation. It's available in a wide variety of styles and sizes. For more information, see your building supply dealer, or write to American Steel & Wire, Dept. 9360, 614 Superior Avenue, N.W., Cleveland 13, Ohio.

USS and American are registered trademarks



and this

Fabric for concrete reinforcement

Buyers will ask, *"is it Reinforced"*



**American Steel & Wire
Division of
United States Steel**

Columbia-Geneva Steel Division, San Francisco, Pacific Coast Distributors
Tennessee Coal & Iron Division, Fairfield, Ala., Southern Distributors
United States Steel Export Company, Distributors Abroad

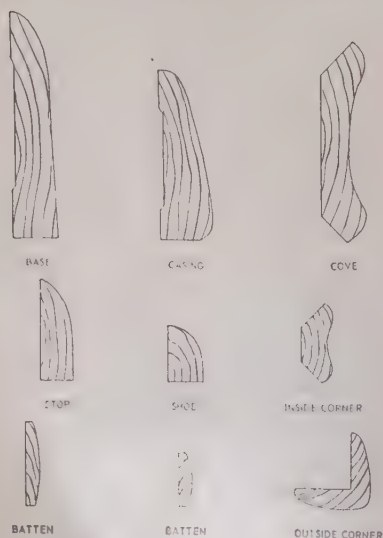


TOUGHEST

finish ever developed



NEW! Mouldings to Match



Complete line of 9 styles in all 12 Poly-Clad finishes. Ends matching and staining problems.

New Poly-Clad® Plywall® prefinished wood paneling

Not only does this beautiful, prefinished wood paneling have the toughest surface ever developed, it's highly resistant to fading from direct or indirect sunlight. In fact, it's guaranteed fade-resistant, guaranteed against structural defects and delamination. Best of all, Poly-Clad's installed cost is usually less than other kinds of interior wall construction. Poly-Clad Plywall comes in *twelve* different finishes, V-grooved or plain. Try Plywall in your homes—you'll lower costs and raise values. Send for free catalog No. FW 359B today.

PLYWALL PRODUCTS COMPANY, INC.

P. O. Box 625, Fort Wayne, Indiana

P. O. Box 837, Corona, California

Announcing a new plan for bigger profits...

The General Electric Kitchen-Laundry “Planned Profit Package”



6

big advantages rolled into one!



G-E's **PPP** MEANS

Here's a way to help net you higher profits. The program is G-E's "Planned Profit Package" . . . and it starts with your decision to install a General Electric Kitchen. G-E's "PPP" adds value to your house, saves you money from start to finish. And . . .

1



POWER OF G-E BRAND PREFERENCE

Among home buyers . . . G-E brand preference studies show most women think G-E makes the best home appliances. Among appraisers . . . Lending institutions in all parts of the country use General Electric's higher quality as a basis for granting higher appraisals. This puts a greater value on your house . . . means more profit for you.

2



PLANNING AND STYLING HELP

Your G-E distributor or dealer has a Custom Kitchen Design service to help you with layouts, perspectives, color coordination. A G-E builder sales specialist will assist you in planning your kitchen, show you how to save space and money. This means more profit for you.

3



SAVINGS ON LABOR AND INSTALLATION

New G-E "Straight-Line" appliances have built-in look without built-in expense. Flat backs and sides on all appliances. Each fits flush. Each is designed for easy, convenient installation. Made to fit any kitchen layout, any house . . . this means more profit for you.

For more information
**Clip this coupon
and send it now**

General Electric Company, Home Bureau,
Appliance Park, Louisville 1, Kentucky.

Please have the local G-E builder sales
representative contact me.

Name _____

Address _____

City _____ State _____

HH-12

MORE PROFIT FOR YOU...

Only General Electric offers you this "Planned Profit Package"

4



PRODUCT AVAILABILITY

100 G-E distribution points in every part of the country assure you wide selection and availabilities no matter where you are. All deliveries scheduled to fit *your* convenience—no long waits, no needless "storing." G-E has the kitchen you want, when you want it. More profit for you.

5



COMPLETE MERCHANDISING PROGRAM

A special Model Home Program gives you a variety of merchandising tools, plus widespread "Success Story" advertising and publicity assistance to help you create model home traffic. With G-E's extensive home promotion program, you'll get faster sales . . . more profit for you.

6



G-E PRODUCT SERVICE

Once G-E appliances are installed your General Electric distributor or dealer relieves the builder of all product service responsibility. No appliance repair or maintenance worries. This means savings after the sale . . . more profit for you.



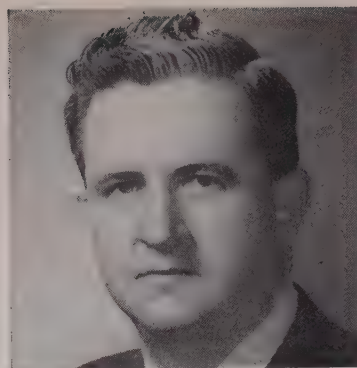
Your local utility company has a Medallion Home Program. By tying in with this program, you'll get more prestige and many promotional advantages—a valuable competitive selling edge. General Electric's "PPP" gives you faster sales, more profits with each house you build.

Progress Is Our Most Important Product

GENERAL  ELECTRIC

W. A. WAGNON
Wagnon & Wagnon Const. Co.
Atlanta, Ga.

"Labor costs in building conventional housing are about five times as great as for manufactured homes. Not only are fewer workers required, but there is far less skilled labor involved in using house packages."



Leaders Like

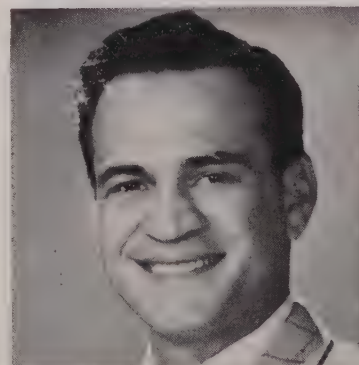
ALLEN S. MANGOLD
Maywood Builders, Inc.
Indianapolis, Ind.

"House packages provide the key to our system of coordinating the activities of all departments of our organization so as to insure the most effective use of capital, personnel and time. Costs on like-model houses vary less than one percent."



JOSEPH V. DUSCI
Dusci Realty Co.
Wheeling, W. Va.

"Use of house packages permits management a minimum executive staff, since drafting, design, planning and take-off are done by the home manufacturer. It also reduces need for warehousing materials, trucks and drivers, allows speed of construction by placing materials under roof in one day."



ROBERT E. ALEXANDER
Alexander Const. Co.
Chicago, Ill.

"Our biggest money-saving 'edge' over conventional builders comes in the erection of the house itself. We use only six men—four carpenters and two laborers—to erect a house in an 8-hour period. Working with a packaged unit, the men attain an efficiency rate unknown when working with conventional methods."



MORGAN G. EARNEST
Earnest Homes, Inc.
New Orleans, La.

"I am enthusiastic about house packages because they enable a builder to cycle his money faster, operate with smaller staff and overhead, benefit immensely from design and production facilities, management advisory services, and financing resources of the home manufacturer."





VINCENT MAZZARA
Home Insulation Co.
Birmingham, Ala.

"After running cost analysis and comparison studies, we found that using house packages cuts building time per unit by at least 33%, which results in faster capital turnover. Purchasing and bookkeeping headaches have been reduced drastically. The excellent architectural design has terrific consumer appeal, results in more sales."

HOUSE PACKAGES



KEN BURDMAN
Hubbard Estates, Inc.
Youngstown & Hubbard, Ohio

"Our market today demands a home of top quality construction, utilizing conventional building material throughout. We get this kind of quality with our house package from a leading HMA member and we expect to build over 600 homes this year."



CLINTON R. SCHATTGEN
Schattgen Realty Co.
WILLIAM CLABAUGH
Clabaugh Construction Co.
St. Louis, Mo.

"Use of house packages provides our separate companies with accurate cost accounting, streamlines our field operations, gives an even production flow for our crews year around. In our opinion no volume builder will be able to compete successfully during the next 25 years unless properly aligned with a home manufacturer."

Free to Builders!

1. HMA's New 48 Page Booklet—

"Profits in House Packages" gives case histories of how small, medium, large volume builders are successfully using house packages. This is a real "How to do it" booklet. Your profits should zoom!

2. Home Manufacturers Roster-Directory—

An up-to-date listing of HMA members and the states in which they sell house packages. A handy, reference guide you'll want to keep on your desk.

HERE'S ALL YOU DO:

Simply cut out the corner of this ad and send it, *with your letterhead or business card*, to the address below. We'll get your free material to you immediately! No obligation.

HOME MANUFACTURERS ASSOCIATION

1117 Barr Building, Washington 6, D. C.



Send Free
BUILDERS' Data
by return mail



BEACON

BEACON SPLIT-LEVEL

10 BASIC MODELS . . . 82 FLOOR PLANS . . .



BRADFORD

Show them what they want . . .
and you'll sell them a

Steelstyle '60

Individuality is the key word with today's prospective home buyers—they know what they want and they won't settle for less. Now you can satisfy your most selective buyer with the new and bigger Steelstyle '60 line of United States Steel Homes. There are 10 basic models . . . 82 floor plans . . . and over 500 variations—a home to fit every family's taste and needs, and at prices they can afford!

END-ELEVATION BEACON

ANDOVER





BEACON WITH PORCH

BEACON WITH BREEZEWAY

OVER 500 VARIATIONS

BUILDING HELP.

Not only will United States Steel Homes supply you with the fastest selling home line of the year—they will help you build and sell them! USSH Sales Representatives have been trained to help you in every phase of your operation—from financing through the entire merchandising program.

USSH WIDENS YOUR MARKET.

Early this spring, USS Homes will bring the Steelstyle '60 line to your customers' attention through the pages of *The Saturday Evening Post*. Four-color ads will add prestige to the Steelstyle line . . . will make more prospects want to buy!

SELLING HELP TOO!

USS Homes will send you your own local promotion! Radio and TV scripts, consumer literature, your own advertising, ad reprints—these and a wealth of other valuable selling tools have been filed into a sturdy portfolio. This is not a seasonal kit, but a “perpetual” promotion, supplemented periodically by USS Homes with the latest selling aids.

CASH IN NOW!

Be a USS Homes dealer! Send the coupon for free brochure that tells more about the exciting Steelstyle '60 line.

USS and Steelstyle are registered trademarks



FREE BROCHURE!

United States Steel Homes Division
United States Steel
525 William Penn Place
Pittsburgh 30, Pa.

Please send me your 24-page brochure containing detailed information on USS Steelstyle '60 Homes.

NAME _____

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

United States Steel Homes
Division of
United States Steel



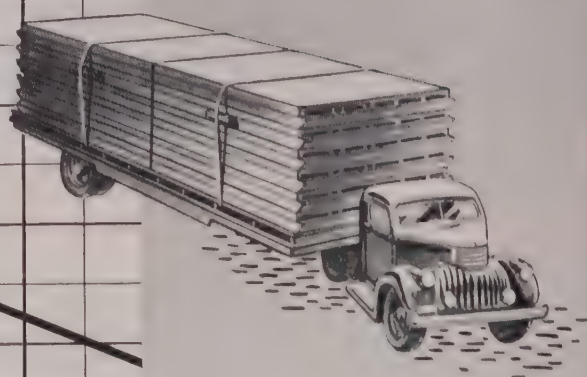
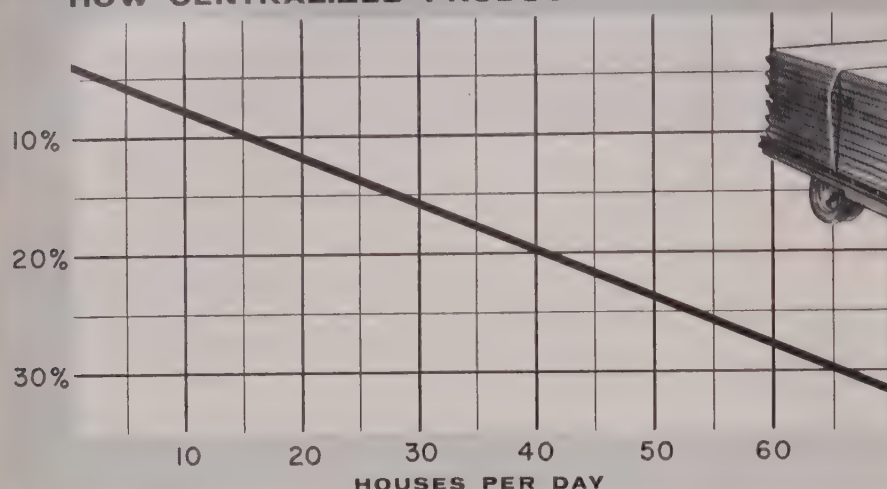
LYNNFIELD

BROOKLINE

MELROSE



HOW CENTRALIZED PRODUCTION CUTS COSTS



Centralized building of P-B Components by the distributor *cuts costs for everybody*

To the Builder—large or small—this means a *saving of about 15% on wall, floor, ceiling, roof and gable components*. Yet you are not limited to type or size of house—*any plan* can be quickly detailed for P-B Components.

You buy your Precision-Built House Components through your retail lumber dealer. The components come direct to the building site. You give the home buyer a top-quality, custom-built house—two to four months sooner than by conventional methods. You maintain a far smaller staff of skilled laborers. You invest no money in expensive equipment. You are fully equipped to compete profit-

ably with every type of prefabricated housing.

Precision-Building of custom-built house components—centralized with the distributor of building materials—is the final development in 24 years of pioneering experience by Homasote Company. Many millions of dollars of homes have now been Precision-Built—from individual homes up to communities of 500 and even 5,000 houses. Centralizing at the distributor's level is fully supported by all the economies of both materials costs and handling operations, borne out by all our 24 years' experience.

First, think of all the handling and rehandling costs if materials go to the distributor, then to the dealer, then to you. Next consider the volume discounts the distributor earns—which are not available to the dealer or builder buying in lesser quantities. Now study the chart above and note how rapidly the distributor's costs come down when he does *centralized* fabricating for a group of dealers and builders. Suddenly there are lowered costs and/or extra profits for everybody in the picture. You have the economies of mass production combined with the flexibility of individual design.

Your walls and partitions are not of some limited arbitrary length or width,

but *room-size*—with either exterior finish or sheathing applied and with the interior finish applied. They can even be wired for electricity. Floor components are built mainly 8-feet in width and of the length needed; the underflooring is insulated and the factory-finished flooring already in place. Ceiling components have the ceiling material already in place. Roof and gable components have the sheathing already in place.

Precision-Built House Components are completely flexible as they are based on the *Bemis four-inch module*. This four-inch control is the greatest cost-cutter yet developed. Instead of 192 units to a foot when working with $\frac{1}{16}$ ", there are only three units to the foot. With this type of simplification many useful charts and tables can be devised that speed up operations—also mistakes are eliminated because of the control. The four-inch control simplifies shop procedures and eliminates the necessity of stopping every few minutes to measure in the field.

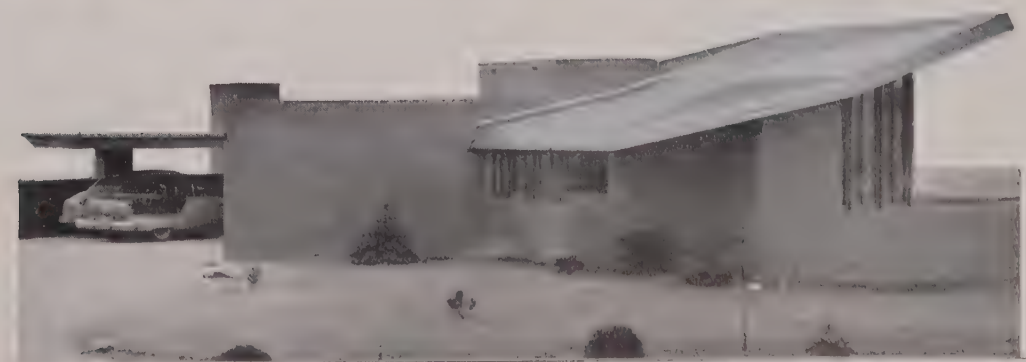
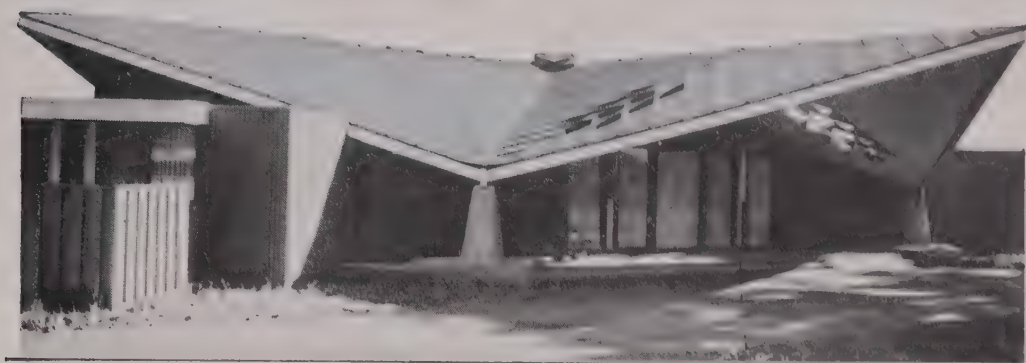
The idea of buying house components is not new. But the centralized fabrication of Homasote Precision-Built House Components is new and sound and a powerful new building and selling tool for every builder—large or small. Spend the time to get the facts. Write or wire Dept. M-6.



HOMASOTE COMPANY • TRENTON 3, NEW JERSEY
Homasote of Canada, Ltd., 224 Merton St., Toronto 7, Ont.



DISTINCTIVE CONCEPTS in roofing with FOLLANSBEE TERNE



The striking roof effects that can be created with Follansbee Terme give any house a distinctive beauty not possible with ordinary roofing materials.

Follansbee Terme is metal roofing at its best—used by architects because it gives them freedom of design and an opportunity to make the roof an important part of the exterior effect—used by sheet metal contractors because it is easy to work with and forms a perfect soldered joint.

Builders recognize the outstanding sales features of a Follansbee Terme roof immediately. In addition to its beauty, a Terme roof will last a lifetime. It can be painted any color, any time; when painted white or a light color, a Terme roof will reflect most of the sun's heat.

There are other facts about Follansbee Terme that we would like to tell you about. Why not write for them today?



FOLLANSBEE STEEL CORPORATION

Follansbee, West Virginia

See Follansbee Terme's "New Dimension" in roofing at the Home Builders Show - Booths 805 & 806, Coliseum

NEW! MARLITE RANDOM PLANK



5945

*fully-finished random-grooved paneling
in six exclusive, new Trendwood finishes*

Marlite now offers true random planks . . . 16" wide and 1/4" thick for easy handling . . . edges tongued and grooved for easy installation. The beautiful new Trendwood finishes (Danish birch, English oak, Swedish cherry, Italian cherry, Swiss walnut, American walnut) were developed especially for Marlite by American Color Trends to complement any room, any decor.

New 1/4" thick Marlite Random Planks go up quickly over furring or existing walls, lower your in-place costs. It's the modern new paneling for dry-wall interiors, new or remodeled. And Marlite's soilproof melamine plastic finish needs no further painting or protection . . . resists stains and mars for years! Get details from your building materials dealer, or write Marlite Division of Masonite Corporation, Dept. 1222, Dover, Ohio.

that's the beauty of **Marlite®**
plastic-finished paneling



MARLITE IS ANOTHER QUALITY PRODUCT OF MASONITE® RESEARCH

MARLITE BRANCH OFFICES AND WAREHOUSES: 204 Permalume Place, N.W., Atlanta 18, Georgia • 18 Moulton Street, Cambridge 38, Mass. • 1925 No. Harlem Ave., Chicago 35, Illinois
6908 Chancellor Row, Dallas 35, Texas • 3050 Leonis Blvd., Los Angeles 58, Calif. • 2440 Sixth Avenue So., Seattle 4, Washington • Branch Office: 101 Park Avenue, New York 17, N.Y.

Builders who "look ahead" specify
hardware by *National of Sterling*



Competitively priced with
built-in quality to

**Protect your
good name**

It's the "little foxes that destroy the vines." And it's usually the small details that make a home buyer either happy or huffy. That's why so many prominent builders *insist* on hardware by "National of Sterling." It adds one more extra touch that helps build customer satisfaction—today, tomorrow and through the years.

WRITE FOR FREE CATALOG TODAY

NATIONAL MANUFACTURING CO.

Dept. 19912 Sterling, Illinois





**Long-Bell
Picture
windows
give you a**

MIGHTY ATTRACTIVE OUTLOOK

From the Viewpoint of

- customer satisfaction
- fast, easy installation
- quick turnover and profitable sales

Long-Bell Picture Windows give you the widest range of fast-selling convenience features ever put into a wall. In fact, Long-Bell Windows are really

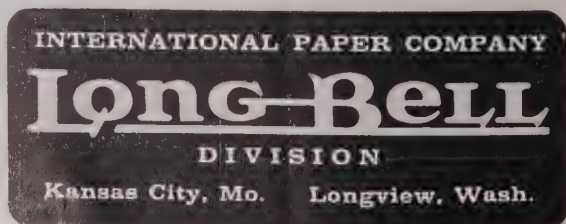
4 WINDOWS IN 1

Long-Bell's new 4-way convertible window may be quickly installed as a case-ment window, a hopper-type window, a stationary window or an awning-type window. Will match any decor.

LOADS OF EXTRA FEATURES

- All wood parts are toxic-treated with water repellents to give you an added sales tool.
- Flush frame surface makes it easier (and less costly) to install in straight, level openings.
- Cartoned units stack evenly and firmly to save you storage space.
- Adaptable to the stock of trim you have on hand.
- Tightly weatherstripped in any position.
- Aluminum storm sash and screens available.

For All the Facts about this "Fastest Selling"
4-in-1 Window Unit, write:





TAPPAN

Postage
Will Be Paid
by
Addressee

No
Postage Stamp
Necessary
If Mailed in the
United States

BUSINESS REPLY MAIL
First Class Permit No. 3 (C.F.R. 34.9), Mansfield, Ohio

THE TAPPAN COMPANY
DEPT. HH 11-9
MANSFIELD, OHIO

ATTENTION: MR. KEN BERKEY

[illegible]

Quick Facts to help you sell your kitchens with Tappan built-ins!



Tappan styling's got 'em all beat! Gas and electric models are exact look-alikes!



Tappan's self-vented 'Fabulous 400' looks built-in but isn't—no rough cut-outs!



'Debutante 400'—newest styling in compact 30"—self-vented!



Copperloy, Lusterloy, 4 more beautiful colors!



Tappan Set 'N Forget burner ends pot-watching and scorching!



Gas and electric ovens, surface units fit same size cut-outs!



Rotisserie bastes meat automatically!



Oven Roast-Meater times roasts automatically!

Please supply me with complete specification, installation and model information on Tappan:

Built-in gas ranges ☐ Built-in electric ranges ☐

The 'Fabulous 400' and the 'Debutante 400' ☐ Built-in Refrigerators ☐

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Go with the biggest built-in advertiser



GO TAPPAN
the biggest selling built-in

Du Pont
neoprene
makes it
possible...



Special double-seal collar design assures weathertight fit on one-piece Carrollton "Mono-Flash" Neoprene Roof Vent Flashing. Finish material can be applied right over flashing's broad apron and up to base of collar. Du Pont neoprene synthetic rubber assures long life for flashing.

NEW WAY TO CUT LABOR COST ON ROOF VENT FLASHING

Prefabricated in one piece. Just slip this tough, lightweight Carrollton "Mono-Flash" Neoprene Roof Vent Flashing over the vent pipe. Then seal with a non-hardening caulking compound. You've got a snug-fitting, weathertight installation without special tools or hot metal and you have eliminated job-site sheet metal fabrication. This new type of prefabricated flashing can be used in place of all conventional flashing materials.

Meets building code requirements. This new molded flashing is made with Du Pont neoprene synthetic rubber which resists sunlight, ozone, weathering, corrosion, heat and cold. It won't soften, won't crack,

maintains a tight seal in spite of building settling or pipe expansion and contraction. It has passed code requirements in key cities and states . . . is now being used in government housing.

Several types available. Carrollton "Mono-Flash" Neoprene Roof Vent Flashing comes in three standard pitches . . . handles either 1½", 2", 3" or 4" pipe for

3-12, 4-12, 5-12 and 6-12 roofs . . . handles 4" pipe on flat roofs or 7-12, 8-12, 9-12 or 10-12 roofs. It is sold exclusively by Carrollton Manufacturing Company, Carrollton, Ohio.

For additional information write to: E. I. du Pont de Nemours & Co. (Inc.), Elastomer Chemicals Department HH-12, Wilmington 98, Delaware.



SYNTHETIC

RUBBER

NEOPRENE
HYPALON®
VITON®
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Better Things for Better Living . . . through Chemistry

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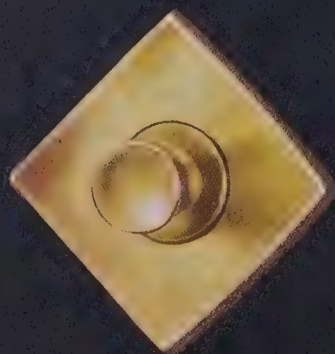
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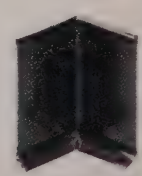
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Roundup:

Has the mortgage market reached another plateau?

The price of mortgage money, which has climbed more than ½% since June, seems to be leveling off. With FHAs at a 94 bottom and VAs at 90 in the West and South, most mortgage men predict no further drop now. They foresee no likelihood that prices will improve much, if any, even after Jan 1. But mortgage men *do* see hope that more mortgage money will be seeking outlets in the spring. They predict there will be enough money in 1960 to finance 1.2 million starts (with the help of Fanny May). S&L leaders take a similar view, suggest that conventional interest rates have reached a peak. They hope that the rate of personal savings will snap back after Christmas and make even more money available to housing.

Most encouraging FHA-VA news is the sudden gush of pension fund money (see p 53). But there is still doubt whether this is the long hoped-for major entry of pension trusts into the mortgage market or just another brief in-and-out flurry.

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FHA rate boost raises usury danger in 12 states

Does the 6¼% interest-plus-insurance paid by an FHA borrower violate usury laws in the 12 states with 6% maximums? Investors doubt it because the top ½% is the insurance premium. But there is no legal precedent. And mortgage lenders are seriously concerned—Fanny May among them. Their legal staffs are scrambling to find loopholes because the wording and exemptions vary from state to state. The states: Delaware, Kentucky, Maryland, Nebraska, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, Vermont, Virginia and West Virginia.

Toughest laws are in New York and Tennessee. They require forfeiture of *principal and interest* in usury cases. Most demand return only of excess interest. But New York exempts FHA loans closed by banks. So one big life insurance company is asking its non-bank correspondents to close future FHAs in the name of a bank. New York Life has temporarily stopped buying FHA loans in Tennessee because of the risk. The Metropolitan is making FHAs at 5½% there (6% to the borrower). Builders must pay extra discount to boost the yield to market levels. New Jersey exempts FHAs and VAs closed by Jersey-chartered corporations. Result: Philadelphia and New York companies dealing in New Jersey are forming New Jersey subsidiaries to sidestep the risk. North Carolina exempts FHAs and VAs originated by financial institutions. The state attorney general has declined to call mortgage banking companies financial institutions en masse. He says he'll rule on a case by case basis, depending on how many mortgages they own in their own names.

Investors are also checking originators closely—on conventional loans. Some fees or charges added to a 6% loan might make the whole deal usurious—in some states.

Is the Pentagon covering up bugs in military housing?

The smell of scandal continues to seep out around the controversial Capehart Act military housing program—an FHA-insured scheme so covered with gilt-edged extra government backing that federal statisticians classify it as "public housing." The latest whiff is word that the Pentagon is trying to bury a report by an architectural consulting firm that the cost of maintaining Capehart housing almost equals the debt service!

If so, this would mean management and maintenance of Capehart units is running close to \$92 per unit per month, or \$200 million a year for the 300,000-odd Capehart units now built. More than a year ago, the Senate armed services committee estimated "from facts available" that Capehart housing maintenance and management were averaging at least \$75 per unit per month. Noting pointedly that this was about twice the \$35 to \$40 a month "for housing projects operated by private industry," the committee twice warned Defense Secretary McElroy to "give this matter close scrutiny."

Last May, the Defense Dept's real property management division asked NAREB's Institute of Real Estate Management what it would cost to have top realtors analyze Capehart operating costs. Answer: \$38,000. Then it developed that Capehart housing maintenance is under the jurisdiction of the construction division, not management. The construction division cold-shouldered the idea of investigating. Why? Avers a recent *Washington Letter* issued by the Natl Apartment Owners Assn: "... because high maintenance costs may reveal some negligence in construction."

Some Congressmen on the appropriations committee are preparing to ask Pentagon brass embarrassing questions next time the Defense budget comes up. When the Capehart program was proposed, one selling point was that quarters allowances would cover *both* debt service and maintenance. Now, some housing men figure the military has been hiding maintenance costs in the \$1.4 billion "base maintenance" appropriation.

NEWS continued on p 48

If you are a businessman builder

BE MY GUEST

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Steel strike, tight money cut sales but 1.2 million starts foreseen in '60

Housing starts and sales are slipping together. The steel strike shares the blame with high-priced mortgage money. Together they have produced a pattern which strikes economists as similar to other postwar housing dips.

"We're in a recession within a recovery," says Economist Miles L. Colean. "During the first three months of the steel shutdown, almost all the major economic indicators turned down about as sharply and as far as in the first three months of any postwar recession. The drop is still going on."

Private starts sank to the lowest annual rate in October since July '58 (see graph), even though the 1959 total (public and private) seemed headed for about 1.35 million. And lenders and builders were calling sales "slow" in two cities for every one where they called them "good."

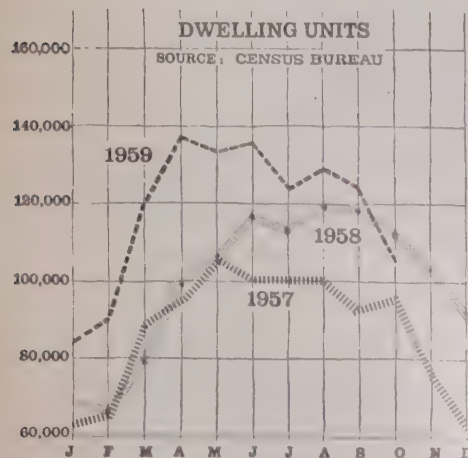
Paradoxically, the steel strike may improve mortgage prospects for next year.

The strike will apparently postpone much spending for plant and equipment. And it will curtail auto sales. Both items will ease demands for money, which should help the generally predicted slight easing of the mortgage squeeze early next year. Biggest help may well be the fact that the Treasury, which took some \$23 billion out of the money market in the last year and a half (capped by October's Magic 5's bond issue), expects to avoid net borrowing in the first half of next year. The Magic 5's hit thrift institutions hard (*Nov. News*). But Treasury spokesmen explain they had no choice because of the Congressionally-imposed 4¼% limit on interest of longterm bonds.

Latest forecasts for 1960 starts cluster around 1.2 million—with the hedge that forces in the economy still shaping up could tilt the result perhaps 5%.

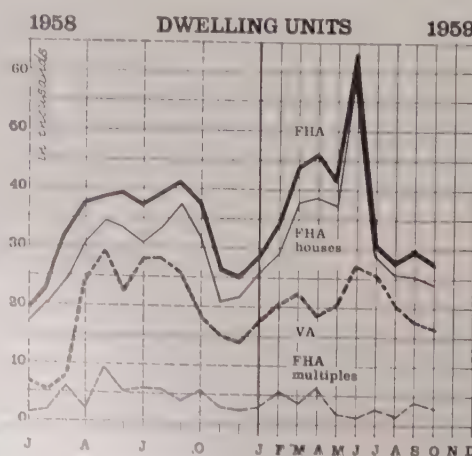
Economist Colean, whose HOUSE & HOME forecast before the strike became so prolonged envisaged 1,240,000 private starts next year, now figures 1.2 million private starts "is a safer prediction." The US Savings & Loan League's economic committee expects a drop next year of "between 100,000 and 150,000 units" from a "very high level" of 1,350,000 in '59. It calls the resulting 1.2 million starts "a good building year." Multi-family starts will drop less than one-family, the league prophesies, because they are less sensitive to high interest rates. Johns-Manville Corp, on the other hand, now forecasts a drop of only 9% in '60 from a 1.38 million mark this year.

To some builders, the cloudy mortgage outlook has a competitive silver lining. "I'd like to live under a little tight money all the time," says Walter Johnson of Niagara Falls, N.Y. "It's better for the good builders. You'd get better builders and better houses. It's been too easy to get into building. All the good builders can get the money they need for sound purposes."



HOUSING STARTS have sunk to the lowest level since July 1958. They totalled only 105,100 in October—down 12.7% from September and off 8.6% from October 1958. The 102,100 private starts represent a seasonally adjusted annual rate of 1,180,000 vs 1,325,000 in September and 1,303,000 in October 1958. Public starts in October totalled 3,000 vs 3,400 in September.

Private starts for the first 10 months of the year are 1,169,100—up 23.7% from the 945,000 in the comparable period of 1958. The seasonally adjusted annual rate is 1,356,000 for 10 months.



FHA APPLICATIONS on new units continued to slide in October as tight money and slower sales show up in builders' plans. The 27,332 applications in October are down 6.7% from September and off a whopping 27.8% from October 1958. Home and project (multi-family) activity both contributed to the decline. But the 10-month total for new home applications (335,490) is still 13.2% above the comparable 1958 figure—due to a big first half.

VA appraisal requests slumped to 16,657—down 7.1% from September.

MARKET BRIEFS

Housing stock improves

The US is making progress against slums, the latest Census Bureau vacancy figures show. Items:

- 72% of vacant rental units in the third quarter of this year had all plumbing facilities (hot running water, private flush toilet & bath) vs only 66% a year earlier.
- Vacant units are getting larger: 22% had five rooms or more vs only 18% a year earlier. Average unit size is up from 3.3 to 3.4 rooms.
- As has been true since 1955, the bulk of non-farm, non-dilapidated vacant rental units were cheap ones: 60% now rent for less than \$60 a month.

Care-Free case closed

Damage suits filed by eight of the 22 builders who took part in Alcoa's 1957 Care-Free aluminum house promotion have been quietly settled out of court.

Federal court records in Minneapolis—where all eight joined to sue—do not divulge the settlement. But one builder fixes his total settlement at \$17,000. Another says he got \$29,000. Company sources indicate the settlements were less.

The builders sued for a total of more than \$1 million. They accused Alcoa of fraud and misrepresentation for (so their suit says) telling them they could build the house for \$32,000 to \$34,000 and sell it for \$45,000 to \$48,000. Instead, they claimed costs ran from \$55,521 to \$78,301 but market value ranged from \$30,000 to \$40,000.

Alcoa agreed the Care-Free house, built in 21 cities, cost more than originally estimated. The prototype of the experimental aluminum house was built by National Homes in 1957 and it was on this home that original cost estimates were made. But Alcoa contended the builders went into the deal with their eyes open, made their own cost estimates, should accept responsibility.

Even before the suit was filed Alcoa had offered all of the 22 participating builders a cash settlement reported at about \$12,000 a house. Fourteen of the 22—some of whom had not complained—accepted the offer.

The eight who have now settled are: Hollin Hills, Alexandria, Va; Martin Bros, Miami; Fred Deblase, Rochester; Westwood Hills Co & Associated Contractors, Minneapolis; Cambridge Village, Cleveland; Keith F. Pratt, Grand Rapids; Gustav Feldtman, Toledo; Kayhoe Construction Co, Richmond.

Movers tie up with realtors

On the reasonable basis that it is good business to make a move from one city to another easier for its customers, North American Van Lines has arranged with a national realtor combine to provide free house-hunting and house-sales services for its customers.

Under the arrangements, each of the lines' customers will receive a brochure from Arms Institute, Inc of St Louis, which has 300 franchised realtors across the nation. The brochure will show, complete with photos, available houses in the price range and neighborhood specified by the customer, with full details on price and financing available. If the prospective movee wants to sell his old home, North American will channel that information into the arms of the realtors, too.

The market is huge. Experts say 2½ million families a year move from state to state.

FHA revising 'unworkable' rules for trade-ins after realtors protest

In September, Congress gave the housing industry one of the big new tools it needs to unlock the trade-up market. It authorized FHA to let realtors and builders have the same loan-to-value ratio mortgage as an owner-occupant under Sec 203 and 220—provided 15% of the mortgage amount is held in escrow to reduce the loan if the property is not sold in 18 months.

Last month, FHA came close to making the new trade-in power useless by restrictive regulations. But a hurriedly-convened squad of top realtor-traders quickly convinced FHA Commissioner Julian Zimmerman the rules ought to be changed—before they were issued. "We want this to work—effectively and as easily as possible," said Zimmerman. FHA staffers went back to re-draft the regulations.

The story begins when John C. Williamson, secretary-counsel of the Realtors' Washington Committee, flew back from a meeting in Williamsburg, Va. with Realtor Mal Sherman of Baltimore.

"The new Housing Act should be a wonderful help to you on trading houses because of the trade-in setup in FHA," smiled Williamson. Replied Sherman: "It looks completely unworkable. FHA is going to base its mortgages on market value or acquisition cost, whichever is less, and the trade-in acquisition cost has to be about 15% less than market value. So the maximum trade-in mortgage will be about 70% and we can't operate on that."

Williamson was startled. Checking with FHA, he learned the agency was indeed about to issue a trade-in regulation basing mortgages on acquisition cost. Williamson moved fast. He got four of the nation's top realtor-traders together in Washington: Sherman, President Stewart B. Matthews and Regional Vice President Arnold Goldsborough of the International Traders Club, and Trader Sidney Z. Mensh. They descended on Commissioner Zimmerman together. Zimmerman got the point fast as Williamson explained:

"In the normal trade-in transaction a broker would execute a contract with the owner for the sale of a house at its market value with the usual commission. However, such contracts almost always provide for a guaranteed price without a commission if the house is not sold. This guaranteed price is generally less than the FHA appraised value. Thus the broker would obtain an FHA mortgage at less than what the ultimate buyer would require. This would mean complete refinancing with double closing costs."

How to avoid windfalls

FHA's proposed regulations were aimed (like the trade-in escrow itself) at preventing windfalls—a paramount aim of FHA administration since the 608 scandals of 1954. In unusual cases, the realtors agreed, there could be a windfall if trade-in mortgages are based on appraised value notwithstanding acquisition cost. But they proposed this solution: let FHA require an additional escrow to prevent it.

Here's an example of how this might work: on a house appraised by FHA at \$10,000, with an acquisition cost of only \$8,000, the mortgage would still be 97% of \$10,000, or \$9,700, with an escrow of \$1,455. This would produce mortgage proceeds of \$8,245 to the builder or broker whose acquisition cost was only \$8,000. So FHA might require an extra escrow of \$845—to take care of the \$245 windfall plus the \$240 minimum statutory down payment requirement.



WILLIAMSON



SHERMAN

Robert H. Johnson

"This would be an extreme case," says Williamson. "A more likely example would involve a guaranteed acquisition price of \$8,500 with the broker obtaining an FHA mortgage of \$9,700. The escrow requirement of \$1,455 would leave the broker with \$8,245 as compared with an \$8,500 acquisition cost. This would mean a cash outlay of \$255, which meets the 3% cash equity required by law."

Another bug which the realtors apparently got ironed out before it was written into the regulations: a builder needs to be able to designate a realtor as his substitute on the mortgage (to avoid double closing costs). Reason: many a builder takes a trade-in house with the intention of turning it over to a broker for sale.

"We hadn't fully realized the part a third party [ie realtor] could play in house trading," says Zimmerman. "We're all pretty optimistic about working it out."

Next, it developed some mortgage men feared Fanny May might not handle trade-in FHAs because 15% must be held in escrow. NAREB took this up with officials, won assurance that FNMA would amend its rules—probably by requiring that the escrow be assigned to it.

Two down, three to go

Promising as it looks, FHA's quick action to make its part of easier house trading work is only two fifths of the help the housing industry needs to unlock the \$100 billion equity home owners have frozen in their present homes—and so let American families trade up to better housing. The other changes:

1. Amend national bank laws to let banks offer 80% short-term financing for trade-in houses, just as they can offer 80%-or-better floor financing for used cars.
2. Let S&Ls invest a limited percentage of their funds in short-term, unamortized 80% loans not only on separate trade-in houses

but also on a builder's or realtor's inventory of trade-in houses placed in trust.

3. Amend the Revenue Act so a builder will no longer have to pay federal income tax on his new house profit until he can get his cash out of the trade-in house.

Despite the boost for FHA trading, the housing industry remains hamstrung by unique restrictions that put lower limits on 30-day credit for a builder's inventory of trade-in houses than on 30-year permanent mortgages. This is one ridiculous result of Congress' 25 years of trying to raise US housing standards the hard way: by easier terms to finance consumption instead of better arrangements to finance production.

Kitchen built-ins eligible for FHA fixup financing

FHA will now let built-in kitchen appliances be financed by Title I home improvement loan.

It has banned them since 1935, even while it started and expanded the system of including appliances and equipment in package mortgages on new homes. Thus homeowners modernizing their kitchen were able only to finance structural work—not built-ins—in an FHA loan.

Now, an appliance is eligible under Title I if it is "a gas or electric unit designed by manufacturers to be installed as a permanently attached integral part of a kitchen." This includes ranges, ovens, refrigerators, clothes dryers and incinerators. Only an owner-occupant is eligible for the financing.

This is the first major change for FHA package mortgages since early last year. In August '58, the Senate banking committee admonished then FHA Commissioner Norman Mason not to add any items to the list of eligibles without first consulting the committee.


FHA action in Alabama row waits probers' reports

FHA Commissioner Julian Zimmerman has promised to crack down if anyone can present real evidence that Alabama Builders Folmar & Flinn were allowed to "buy" FHA Sec 221 relocation housing commitments that are being blamed for a glut of housing (Oct, News).

But up to mid-November, Zimmerman hadn't yet seen the report of HHFA investigators who are checking on operations of the Alabama FHA office, target of criticism by local builders for "playing favorites" in handing out FHA 221 commitments.

The HHFA investigation and an audit by FHIA (still under way), were begun after court records showed that state Republican leaders had displayed uncanny judgment in buying up sites that F&F later bought to build both Sec 221 and Sec 203 housing, at sizeable profit to the speculators (Nov, News). One such deal involved \$347,000 net profit to Marvin Mostellar, Republican national committeeman, and Carl B. Thomas, Huntsville land developer, on a Mobile site then used to build 931 units of minority housing, in spite of warnings by city planners that it was too far from Negro employment centers (10 miles) for Negroes to move into it. Of 733 Sec 221 units built, 380 are still unsold; total unsold in the subdivision is 480, of some 1,400 F&F houses built but unsold in the state.

NEWS continued on p 52



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LA sales good; slow in Cleveland, St. Louis, Boston

Los Angeles: Builders are more worried over the high (and rising) price of land than over tight money. They say acreage in good locations is "almost impossible" to find under \$8,000. This pinches the still big group of builders who are shooting for the under \$15,000-market. Another, somewhat smaller group of builders now figures the over \$25,000 house is the market. This currently leaves the \$15,000-\$25,000 price range relatively deserted—for the moment.

Starts in southern California's 14 counties are headed for an all-time mark this year, says the statistics-keeping Security First National Bank. The current building rate would produce 162,760 units for the year vs the 1955 record of 149,203. Los Angeles and Orange Counties are still the two biggest markets, but their share is shrinking (they accounted for 105,546 of the 1955 record, but figure to account for only 92,400 of this year's mark). In 1950, Los Angeles County alone constituted 71% of southern California starts; for the first nine months of this year, it was only 41%.

As elsewhere across the US, the pace of housing boomed during the second quarter, slowed during the third. In Los Angeles, multi-family starts fell more than one-family starts—a cheering note to the Apartment Assn of LA County which points in alarm to a June vacancy rate of 6.93% for furnished units, 9.3% for unfurnished.

The unsold overhang of new homes is down, but the Residential Research Committee shies away from disclosing its expensively-gathered figures. A spokesman says the committee sometimes declines to reveal its findings, depending "on how it thinks this will influence eastern money." Builders call sales good, but spotty by areas (as usual). San Bernardino County is doing better than in the past three years. Sales in Riverside and Orange County are good.

To nobody's surprise, big discounts on FHAs (6 points) and VAs are pushing more and more builders into conventional financing, often with second mortgages, contract sales and rent-to-buy schemes. Dr. James Gillies, assistant dean of the UCLA business administration school, estimates this financing picture for new homes in the first half of the year: 65% conventional, 33% FHA-VA, 2 or 3% Cal-Vet.

San Diego: For the first time in seven consecutive quarters, starts failed to set a new record. They dropped 15% from the second quarter in the third, from 8,404 to 7,184. Single-family units were off 8%, from 6,286 to 5,787. The City Planning Commission says this decline indicates the peak of the area's boom has passed, but doesn't signal a radical break in the market.

Cleveland: Starts are well ahead of a year ago (7,000 vs 5,500 through October). But builders say sales are in a slump that began in September. Prospects inquire, seem ready to close a deal, then back out. "People are sitting on their money," say builders.

St. Louis: Sales are slumping. Builders blame tight money and steel strike jitters. One large realty firm reports a 40% drop in residential sales from the fall of '58, and an even sharper drop from late summer (\$1 million in October vs \$2.25 million in September). Yet inquiries remain high, and starts, at 10,000,

should wind up 20-25% ahead of 1958. "Modified contemporary" at \$15,000-and-under is the best seller. Developments, spurred by improved transport facilities, are reaching across the Missouri river into St. Charles County and other outlying counties.

Boston: Unsold inventory is growing, builders agree. Starts were up 10% from a year earlier

for the first three quarters of '59. But sales rose only 8% for the same span. Big sales factor in new houses is demand for lots of bedrooms—three and four are the rule, with some fives, and practically no two-bedroom houses. Prefabs are beginning to make inroads; several sizable (for New England) developments of from 100 to 400 houses apiece, are going up.

PREFABBERS' CONVENTION:

'We've got mortgage money,' they say

Most housing prefabricators are brimming with sales confidence and mortgage money despite the tightest mortgage squeeze in years.

This was the standout trend discernible at the 16th annual convention of the Home Manufacturers' Assn in Roanoke, Va.

How can prefabricators get big lines of mortgage credit for their builder-dealers when conventional builders are having more and more trouble? No. 1 reason, say home manufacturers, is mortgage acceptance corporations. Items:

- Fourteen of 25 companies polled on the question now have mortgage acceptance subsidiaries—"a bigger showing than ever before," according to pollster William B. F. Hall, president of General Homes, Ft. Wayne.

- Eleven of the 25 companies are still giving their builder-customers firm-price commitments on mortgage loans—usually up to about three months ahead.

One result is that the biggest prefabbers—National, Inland, Kingsberry, Harnischfeger and Crawford—are looking for their biggest year yet. A few small companies, on the other hand, admit shipments of their house packages have slackened lately because of tightening money (and their own lack of a mortgage subsidiary).

More mortgage help was offered by Max H. Karl, president of Mortgage Insurance Corp., Milwaukee who told the convention: "To combat a tight money market which finds lenders less inclined to make high ratio loans, MGIC* will insure contracts for deeds up to 90% of appraisal value, predicated on the builders' securing underlying mortgages (perhaps 80%) from a regulated and supervised lending institution. This, in effect, will allow a builder to make a 90% contract between himself and the buyer. He could go up to 95% but the top 5% would be uninsured." (See p 56 for more details.)

Chief concern about the future volume of house production was voiced by E. E. (Gene) Kurtz, president of HMA and head of Inland Homes Corp., Piqua, Ohio, whose volume had more than doubled this year with a low-price house package. He predicted a precipitous slide in house production "unless we can convince builders now to go after the low-cost market." His view was supported by giant National Homes but not all the industry.

Chief topic in and out of the formal meetings was the prefabber's financing of land for acquisition and/or development.

President George Price of National Homes cautioned fellow manufacturers to get into land development activity slowly, not to use

*Now licensed in 31 states, MGIC does business in six more through surplus line brokers. Its volume of insured loans rose from \$12 million the first quarter of this year to \$25 million the second quarter, \$35 million the third quarter.

Commercial Photographic Services



PREFABBER KURTZ, BUILDER HUGHES
Are 25% of builders prefabbing?

it as a substitute for selling. Said he: "Every deal is different. There isn't a formula you can work to. Sometimes we amaze the builder by turning up the farmer who owns the land as the most logical source for banking the cost of its acquisition."

Said Gene Kurtz: "Land development money has now become respectable. Actually there is nothing new or revolutionary about this. National banks can take land as part of their security. Our own conservative bank gives us 100% financing for land."

Other evidence that prefabbers are gaining strength came from guest speakers R. G. (Dick) Hughes, NAHB past president, and FHA Commissioner Julian Zimmerman.

Revealed Hughes: "A recent survey by EPIC (NAHB's top level Economics and Planning for Industry Committee) turned up the fact that one out of four builders was using 'other than conventional' means to build his houses. And 95% of the other three were seeking to transfer their on-site production to a central production facility."

Hughes urged prefabbers to take on house components. He warned: "If the manufacturers [of building products] make up their minds to build components, they will. I'd suggest you broaden your product line to include them."

1960 outlook: more money early in the year—at same steep prices

Housing's worst mortgage pinch in years apparently has reached its peak.

Most mortgage men—though not all—now look for more money after Jan. 1. But they expect no better prices. Most optimistic forecast: there will be nearly as much mortgage money available in 1960 as in 1959—enough to finance another big year if demand for houses is strong.

Economist Leon T. Kendall of the US S&L League draws this picture: "As far as tight money is concerned I believe the worst is over. I base this on these major presumptions: that the business pickup after the steel strike will be relatively gradual, that fewer autos will be manufactured and sold than the auto makers prefer and that the Fed will not be forced into strong anti-inflation activities."

Concludes Vice President Raymond T. O'Keefe of the Chase Manhattan Bank: "It seems entirely possible that we might be close to the ultimate peak in interest rates for the current phase of the business cycle." He predicts there will be enough mortgage money for 1.2 million starts in '60, off 10% from 1959. Executive Vice President Don McGregor of T. J. Bettes adds optimistically: "We may even see a better price."

Sliding sales and starts may be some of the most important influences in the 1960 money market if they produce a mortgage shortage.

Across the US, mortgage bankers and builders reported sales off in November. Many a mortgage commitment was expiring at above the market prices.

There is growing evidence that prospective homebuyers may be rebelling at higher interest rates. Says Allen Bradley of Denver's Mortgage Investments Co: "It's not so much the psychology of tight money as it is the psychology of expensive money that has discouraged buyers. They know the difference between 5¾% and 6¼% and they aren't ready to pay it." Another factor: the steel

strike has hurt sales in many cities, particularly the industrial hubs.

The unexpectedly high number of unfulfilled commitments has another explanation. Says President Ray Lapin, Bankers Mortgage Co in San Francisco: "A lot of builders saw tight money coming and they overloaded with commitments. Now they can't use them all." Some are as much as 4 points over the market.

This has had one good effect. Life insurance companies which had feared they had overcommitted now find themselves with money to spare.

Best news in many a month is the sudden new interest of pension fund trustees in FHAs and VAs.

Two weeks after FHA boosted its rate to 5¾% the big New York banks which administer the funds ordered mortgages from both Investors Central Management Corp and Instlcorp. (ICM is the mortgage banker-owned company which performs the home office function for pension funds. Instlcorp is a subsidiary of Institutional Securities Corp, New York savings bank-owned mortgage investment company.)

The big pension funds bought very few mortgages earlier in '59. Why this sudden interest? Says ICM's Executive Vice President Arthur Viner: "It's simple. We are now competitive in the fixed income area. Pension funds are vastly more flexible than other investors. When a chance is there they move."

Don McGregor, one of several mortgage bankers dealing with smaller funds throughout the US, sees long range significance in this latest pension fund activity. "I think they're buying now because they have made some long range decisions to buy more mortgages all the time."

Mortgage men and investors are breathing easier after the Treasury's latest \$10.9 billion refunding.

There was no repeat of the October surprise that saw the Treasury sell nearly \$1 billion in 5% notes to individual savers. The "Magic 5s" took so much of this money from savings bank and S&L accounts that most big New York City savings banks will not be buy-

ing out-of-state mortgages before March, they say.

This time, the Treasury exchanged one-year 4¾% and four-year 4¾% notes for maturing issues held mostly by institutional investors. Individual savers could not buy directly.

Sales in the secondary mortgage market have slowed to a trickle.

Several mortgage bankers queried by HOUSE & HOME report so little trading in uncommitted loans they say they are only estimating what current market prices are. FHA 5¾s seem to be bottoming at 94; VA 5¾s at 90. But with savings banks—the major over-the-counter buyers—out of the market, not many loans are being sold at these prices. Fanny May, with its 95½ bottom net on FHAs, is still the primary over-the-counter market.

If you must build—

What does a builder do if he must get mortgage money in today's market? HOUSE & HOME's 16-city mortgage survey uncovered these possibilities:

- Take back a second mortgage if you can get a local S&L to make the first. Mortgage builders are doing it, find that taking a second lets them defer income and reap a tax benefit.
- Get an S&L to make a 90% mortgage, then put back 10% from your own pocket in an S&L passbook account to reduce the S&L's exposure. When the mortgage is paid down to 80% you get your 10% back plus accrued interest.
- Sell on land contract—still a popular device in California and becoming more common around Chicago. It's great for builders, risky for buyers.
- Work on standbys. More mortgage bankers, who expect easier money after Jan. 1 are now advising this. They predict the loans will not be hard to sell next spring. But it's a gamble for builders.
- One mortgage banker has only this gimmick to offer: "Cut your throat."

MORTGAGE BRIEFS

Squeeze hits New York

New York homebuilders are learning for the first time what tight money means—and they don't like it.

They are still far better off than most builders in parts of the South and West. Yet they are demanding legislation, if necessary, to force New York mutual savings banks to curtail out-of-state mortgage investment.

Cries President Alexander Paulsen of the Long Island Home Builders Institute: "Savings institutions have a moral obligation to satisfy the mortgage and other financial needs of their own communities before any other consideration."

The squeeze in New York was triggered by the Treasury's October refinancing—the "Magic 5s" (Nov., *News*). In other postwar times of tight money, savings banks have had enough funds for local loans, usually at par, even as they cut back out-of-state buying. With the runoff of deposits in October even banks which make local house loans (many of them don't) cancelled many commitments, boosted discounts on VA 5¾ loans to 5 points (FHAs are 99-par) and began making new commitments for only three months.

Builders claim they are unable to get mortgage money at all in some cases. Savings bankers deny it. Says Managing Director George M. Penney of the state Savings Bank Assn: "Never in history—and even today when money is tighter than in many, many years—has any worthy applicant for a home mortgage been denied a loan by a New York savings bank."

State Banking Superintendent G. Russell Clark sides with the banks. Says he: "To take a provincial attitude regarding [out-of-state] loans . . . seems to be most inappropriate . . . Higher earnings from out-of-state investments . . . often mean greater dividends to depositors in New York."

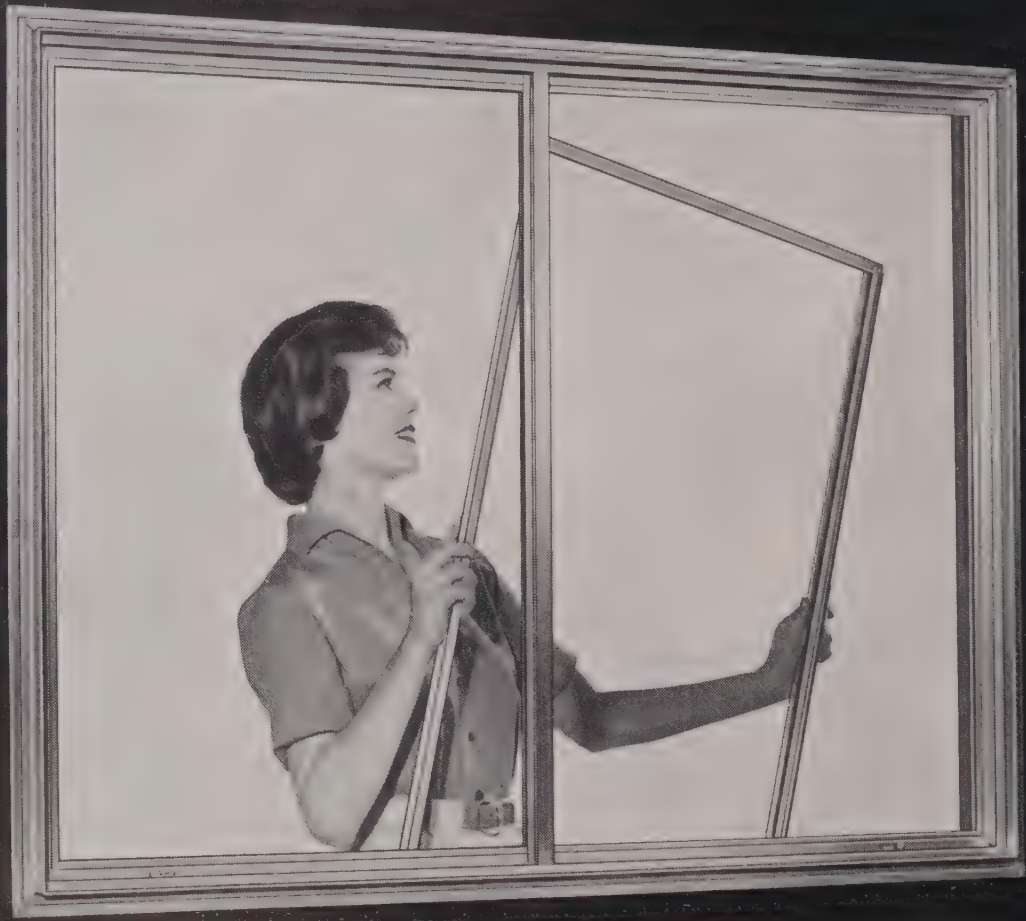
Clark did suggest the banks might avoid criticism if they would set up a clearing house so banks not making local home loans could send borrowers to banks which are.

Bigger special aid loans

As the 1959 Housing Act permits, Fanny May last month boosted its loan ceiling from \$15,000 to \$17,500 for special assistance loans.

NEWS continued on p 56

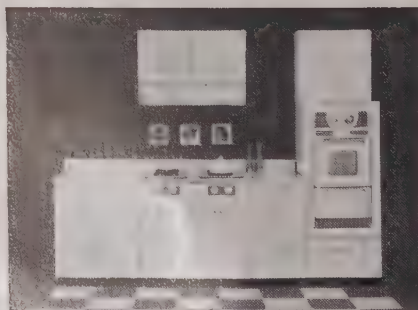
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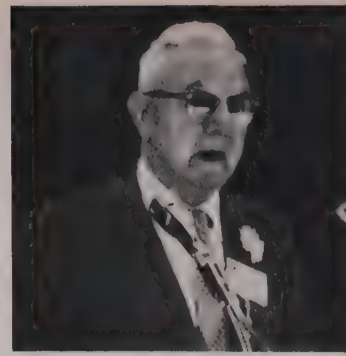
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For officials: a ban on vengeance?

S&Ls attack bankers over tax change plan

Cutting S&L tax-free reserves would stunt S&L growth and so cripple housing finance, they cry

For years, the feud between commercial bankers and savings & loan men has bubbled along just under above the surface. Now it has erupted into a full-scale battle.

At issue is a bill which would boost S&L taxes, sponsored by the American Bankers Assn and introduced by Rep Noah Mason (R, Ill.). S&L men charge it would force them to cut interest paid to shareholding depositors by 1 to 1½% and thus: 1) cripple S&L growth, 2) force S&Ls to curtail mortgage lending drastically and 3) reduce privately financed new housing by as much as 40%.

The squabble flamed up in Dallas last month at the US Savings & Loan League's 62nd annual convention. Chief developments:

1. In his address opening the convention, outgoing League President C. R. (Bob) Mitchell of Kansas City made what was, up to then, the sharpest attack on commercial bankers in S&L annals. (For years, S&Ls have turned the other cheek to bank sniping—"It used to work," says Past President Henry Bubbs).

Mitchell's talk was so carefully studied that it was not merely mimeographed, but printed in advance of delivery. He charged that if the Mason bill had been law for the last five years it would have cut home building so drastically that "this country might not have enjoyed its recent years of prosperity." He said the Mason bill, if adopted five years ago, would have let S&Ls finance only 980,000 new houses since then, instead of 1,750,000 and would have let them make only \$30 billion instead of \$53 billion in home loans. Commercial banks, he said flatly, would *not* have made up the difference, so "chances are the great majority [of the other 770,000 new houses] would have been built with public money—either by direct lending or as public housing."

2. Mitchell—joined by President John deLaittre of the Natl Assn of Mutual Savings Banks—fired off a scorching telegram to the ABA demanding an apology for the "unwarranted slur" on both institutions by ABA's outgoing President Lee P. Miller. (Miller, president of Citizens Fidelity Bank & Trust Co of Louisville, told a press conference at the ABA convention in Miami Beach that he considered it "unfair and unpatriotic" for mutual thrift institutions "not to pay their share of US income taxes.") Asked the telegram: did Miller and the ABA consider it "unpatriotic" for S&Ls and savings banks to pay higher interest to depositors, to be financing more than three times as many

homes than commercial banks?

3. At a press conference, Past President Bubbs (now chairman of the league's legislative committee) accused commercial bankers of making such an issue over S&Ls' 12% tax-free reserves (vs an average of 3% for commercial banks) only because Arthur Roth, president of the Franklin Natl Bank on Long Island, "threatened to run for ABA president" unless its leadership backed him in this struggle. "The bankers," boomed Bubbs (who is himself a director of a bank in his hometown of Topeka, Kan.), "aren't a damn bit interested in our paying more taxes. They're only interested in holding down the dividend rate . . . so we'll be easier competition."

4. At its final general session, the league adopted a resolution 1) blaming the tax fight on "a group of extremists [in ABA] dedicated to the destruction of the S&L business" and 2) urging S&Ls to yank their \$2 billion in cash deposits out of commercial banks which support the ABA stand.

Behind the rhubarb

"Actually," says Executive Vice President Norman Strunk of the US League, "the banks have been hacking at us for years. But the worst didn't start until 1951, after the postwar easy money period had passed. The demand for money was strong. The banks started looking around for new sources, and they saw all that money we had. They noticed some S&Ls had new buildings, spacious offices. They looked past the deposits and they saw the tremendous business in home loans we were doing—a business that from Depression experience they had considered a bad one. Now they saw that times had changed, that we were making a lot

of money in home loans. The trouble was that while the banks had their backs turned a group of specialists had come in.

"The first thing they did was start passing resolutions, putting out brochures and so forth trying to cut us down; they tried to limit branch operations."

Despite such attacks, S&Ls have prospered. Since 1945, S&L assets have swelled from \$8.7 billion to \$55 billion. And the industry expects to reach \$63 billion by year end. S&Ls do 40% of the nation's home mortgage lending, expect to do 50% by the end of the next decade. S&Ls employ 50,000 people today, expect to have 75,000 in five years and over 100,000 by 1970.

S&L leaders admit many an S&L pays little income tax directly under today's tax formula (although some experts insist S&L depositors pay the Treasury more taxes on deposit interest than commercial banks and their time depositors do). But they argue that S&Ls (and mutual savings banks) must have bigger loss reserves than commercial banks because long-term mortgage loans are riskier than short-term business loans.

• • •

With the big (4,660-member) US League taking such a strong stand against the Mason bill—just as the House ways & means committee begins a major overhaul of federal taxes—will the smaller (525-member) Natl League of Insured Savings Assns take a similar stand? "I'm sure we will," says new President Oscar Kreutz.

Private loan insurance offered for land contracts

When Congress refused last year to set up a new insurance program to let S&Ls make 90% insured loans, savings & loan men in effect set out to do it for themselves. Some of the top men in the S&L field joined the board of Milwaukee's Mortgage Guaranty Co, which offers private insurance a la FHA (for less than FHA charges). Since then, MGIC's portfolio of insured loans has grown from \$48 to \$127 million, its operations have expanded from 16 to 31 states.

Now, the company is pioneering a new kind of loan insurance—in response to tightened mortgage money: it will insure home builders against loss on contracts—for deeds, up to 90% of the property appraisal. Thus a builder can sell conventionally-financed homes for 10% down (or 5% down with the top 5% uninsured) by getting an 80% loan in his own name and leaving his profit plus what an FHA or

VA discount would cost in the house as deferred income (which may have tax benefits).

By mid-November, MGIC had some \$600,000 worth of applications for its new scheme, reports President Max Karl. "We'll be dealing with select builders," he told HOUSE & HOME. "His reputation is important. The builder is the servicing agent. If he is lax collecting, we'd be in trouble." And MGIC will continue to pass on the buyer's credit, too.

S&L interest in MGIC is high. Last January, it was doing business with 126 customers; now it has 454. At Dallas, 350 convention-goers showed up at a MGIC breakfast where the company had counted on about half that.

Other convention developments:

- The Home Loan Bank Board should amend its rules to let S&Ls sell participations in conventional loans to people outside the S&L field, like pension funds, said League President Mitchell.

- "Holding companies have no place in the S&L business," said white-thatched Dr. William E. Husband, general manager of the Federal Savings & Loan Insurance Corp. "In the long run they will do you irreparable harm" (a view shared by the league). Husband cited one holding company "organized by selling 100,000 shares of stock at \$1 each to insiders." Then, he said, the company borrowed \$10.7 million from a bank (which got an option to buy 42,500 shares at \$1). It used the money to buy control of a stock S&L. To repay the loan, less than three months later, it sold stock to the public at \$23.50. Since then, the company has paid 5% dividends three times, split its stock 2½ for 1 and is selling at about \$50 to \$60 a share. "So you might say, 'Who lost?' And I will say: in the long run, the reputation of the S&L business lost."

- League General Counsel Horace Russell, retiring at 70 after 35 years in S&L work (the last 21 with the US League), advised the 3,200 delegates to press for a law which will prevent federal or state S&L officials from deliberately "building up a case" against individual S&Ls for years, then springing the charges all at once. He predicted that state and local taxation—"so much more than anybody realizes"—will become S&Ls' biggest problem in the 60's. His solution: get S&Ls under banking statutes so states can tax them only one way.

- Behind-the-scenes, S&L leaders worked to persuade the HLBB to squelch a fantastic ruling by its general counsel, Tom Creighton, that throws a monkey wrench into long established flexible mortgage contracts. Creighton has held that it is illegal for an S&L to accept pre-payment on a loan, then automatically credit the pre-payment against the sum due if the borrower later misses a payment.

HLBB cripples land loan law with restrictions

The Home Loan Bank Board has imposed such stiff restrictions on S&Ls newly-granted power to make loans for land purchase and development that many S&L men contend the authority will be almost useless.

Congress wrote the new power into the 1959 Housing Act. The law is silent on the loan-to-value ratio. The HLBB, which took a dim view of the idea in the first place (ap-

parently on White House orders), has decided to limit loans to 60%. The law lets S&Ls lend up to 5% of withdrawable accounts. HLBB regulations cut this to 3%. And as the law specifies, HLBB rules will let S&Ls get into land development loans only when their reserves, surplus and undivided profits exceed 5% of withdrawable accounts. Loans must be repayable within three years and development work must begin within six months of the "date of the security instruments."

HLBB Member Bill Hallahan defends the cut from 5% to 3% of withdrawable accounts on grounds that the board told Congress while the legislation was under consideration that it would do something like this. Land development, he told a convention session, "wouldn't be in the Act at all if Congress hadn't had assurance we would implement it in a conservative and cautious way." But Hallahan concedes the time limit on developing may be too short because localities often delay developers with every thing from inertia to red tape and stubborn obstruction.

Some land development experts contend the three-year loan limit is too short, too. "Five or six years is more like it," says one Texas expert.

Other land-loan restrictions by the HLBB:

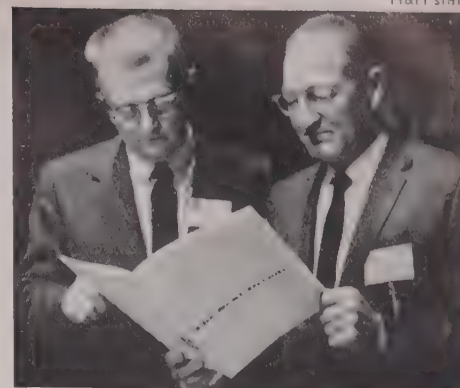
- No loan or combination of loans to one borrower may exceed 15% of the maximum loanable by the S&L (ie 15% of 3%, or just under ½% of savings accounts. For a \$100-million S&L (and there are only 38), this would mean a maximum loan of about \$450,000 to each developer.

- No loan may exceed 1) 60% of the value of the raw land plus 60% of development costs or 2) the value after development is completed—whichever is lower.

- Disbursement of loans is limited to 60% of raw-land value before development plus 60% of development costs to date. And 15% must be held back until development is complete.

- Borrowers must disclose original and subsequent costs.

- S&Ls are prohibited from participating in



TEN-YEAR LOOK at S&L prospects was presented by Dean Arthur M. Weimer (r) and Prof. Edward E. Edwards of Indiana University business school. They foresaw an average of between 1.3 and 1.4 million starts during the '60s, predicted outlays for new housing and fixup would rise to \$247 billion vs \$163 billion in the '50s. Their prediction: "Government will interfere with private institutions to the extent necessary to get the job [of raising housing standards] done."

lending or selling. Loans must be secured by first liens; the land must be within the normal S&L 50 mi radius.

How the new setup works, according to the US League:

A plot of land is appraised at \$50,000. An S&L can lend no more than \$30,000 before development begins. Succeeding payouts cannot top \$30,000 plus 60% of the actual improvement costs as they are put in. If total development costs \$200,000, the loan ceiling is \$150,000; \$22,500 must be held back until the work is done.

For sketches of the US League's new president and vice president, see People, p. 79.

Conventional loan discounts charged as rising interest rate pinches S&Ls

The money squeeze has caught up with sav- ings & loans. And it's worrying them.

Though savings accounts are still increasing, S&L leaders are edgy about the future. "If interest rates continue up it could endanger the whole concept of saving in thrift institutions," warned one S&L leader at the 16th annual convention of the Natl League of Insured Savings Assns in Miami Beach.

S&Ls are caught in a pinch all their own. They have big portfolios of long-term, low-interest loans made over the past 10 years. Rates may go up on new loans but this has no effect on the yield from old loans. So despite a 1% leap in mortgage rates in the past year, S&Ls cannot match this in dividend rates. And if they can't offer top yield to savers they run the risk of losing, rather than gaining savings.

Natl League President James Bent of Hartford Federal S&L estimates: "It takes a yield of 6% on your whole portfolio to pay a dividend of 4%." Most S&Ls figure they can boost yield on a whole portfolio no more than 0.1% a year. Bent's S&L now pays 3½%, has managed to do so only by selling low-interest loans at a loss to reinvest the money at a higher yield. And he, like most

other S&Ls, now charges discounts on conventional loans.

Discounts rarely go by that name. More often they are fees buried in closing costs. But they do give S&Ls immediate income which they can use to step up dividends to savers. A sampling of S&L executives at the Natl League convention shows that 2 points is the most common discount though there is a trend to 3. In California, fees go as high as 6 or 8 points.

Discounts are still not universal. President W. Franklin Morrison of Washington's big First Federal S&L shuns them.

Public relations on discounts—surprisingly—has proven no problem. Says Paul Westfield of Cincinnati's Home Federal: "The public is getting accustomed to discounts. They know what a discount is. Of course in many deals it is split between the real estate

continued on p 60



BENT

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add convenience appeal
to my home designs"



New home kitchens must have eye appeal—but eye appeal without convenience will not satisfy customers. There is no convenience like a built-in KitchenAid dishwasher, which combines beauty with *real* convenience.

Homemakers like the way a KitchenAid dishwasher provides extra time—and maintains kitchen neatness. The big, blue revolving wash arm power-washes dishes cleaner and flowing, sanitized hot air dries them brighter *automatically*. Pattern loading is never necessary.

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"But there is no exaggerating the importance of discounts to us. They can be the difference between paying a competitive rate on savings or not."

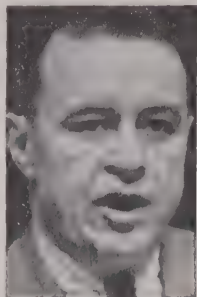
Dividend pressure up

The S&L industry has mixed emotions about how far dividend rates can be boosted. Rates are already up to 4% in most areas; 4¼% in California and 3½ to 3¾% in the Northeast. A few S&L men admit privately they would like to see the HLBB clamp a ceiling on the rate (like the 3% limit commercial banks can pay on savings).

But most oppose this idea. Says Bent: "I still believe in the law of supply and demand." Agrees another: "We have an obligation to pay a competitive rate to the people who give us their savings."

Yet the one HLBB member who made

H&H Staff



HALLAHAN

anything resembling a policy statement at the NLISA convention, William Hallahan, pleaded for restraint: "We as savings institutions cannot be all things to all people. We should not lose our perspective and run our operations only to meet the competition [from other investment opportunities]."

"There has never been a better time to increase your liquidity, not increase your dividend rates. This is a time when you should balance your mortgage portfolios." Hallahan suggested S&Ls be more selective in loans, make more lower loan-to-value ratio loans to balance higher ratio mortgages made in times of easier money.

No holding company ban

The Natl League also decided to drop its support of laws banning S&L holding company expansion. Congress passed a stopgap law this year forbidding more holding company growth until May 31, 1961. The HLBB is to make a new study and recommendations next year. The Natl League, like the US League, supported the ban.

Now, the National League will boost regulation of S&L holding companies by the HLBB. The shift in policy came without debate or dissent. Chairman Hillary Evers Jr

of the League's permanent stock division told the board of governors: "We do not feel the present bill is fair. We remind the League that we do not know what the future may hold. We suggest legislation to permit holding companies to be regulated . . ."

The League also asked for legislative and regulatory changes to let S&Ls step up their lending on multi-family rental housing and in urban renewal areas. Said Bent: "When S&Ls were started years ago they were small and couldn't finance big projects. The need then was for homes. Housing needs are changing. Now the demand for rental housing is increasing and there are savings & loans big enough to finance them. They should be given power to do so." Changes asked by the League seek authority to:

- Make loans on 1- to 6-family buildings instead of 1- to 4-family (the loans not to be counted in the 20%-of-assets an S&L can lend without regard to loan size or geography).
- Lend up to 70% on all properties over six units (instead of 60%).
- Let multi-family projects qualify as collateral security for HLBB advances.

The League wants S&Ls to get power to lend up to 20% of their assets on residential properties of any size in urban renewal areas.

NEWS continued on p 63

MORTGAGE MARKET QUOTATIONS

(Sale by originating mortgagee who retains servicing.) As reported to HOUSE & HOME the week ending Nov 13, '59

FHA 5¾s (Sec 203) (b)							VA 5¼s							
FNMA Scdry Mkt ^{xy}	New Construction Only				Existing ^a Min Down 25 year Immed	City	FNMA Scdry Mkt ^{xy}	New Construction Only				Conventional loans		Construction loans ^w Interest + fee
	Minimum Down* 30 year Immed	Fut	10% or more down 20-25 year Immed	Fut				No down 30 year Immed	Fut	5% or more down 20-25 year Immed	Fut	Comm. banks, Insurance Cos.	Savings banks, S & Ls	
96	96-97	95-97	97	97	95-96 ½	Atlanta	92	91 ^b	91 ^b	91 ^b	91 ^b	6-6¼	6-7	6-6½ + 2½
97	par-101 ^m	par-101 ^m	par-101 ^m	par-101 ^m	par-101 ^m	Boston local	93	98-par ^b	98-par ^b	98-par ^b	98-par ^b	5 ½	5 ½-5¾	5 ½-5¾
—	94 ½-95	94 ½-95	94 ½-95	94 ½-95	94 ½-95	out-of-st.	—	90-91	90-91	90-91	90-91	—	—	—
96	95-96 ^b	95-96 ^b	97-98 ^b	96-97 ^b	97-98	Chicago	92	90-91 ^b	90-91 ^b	92 ^b	91-92 ^b	6	6-6½	6-6½ + 1½-2
96	96 ½-97	96-96 ½	97-98	96 ½-97 ½	96 ½-97	Cleveland	92	93-94	a	93-94	a	5¾ ^b -6	6-6½	6 + 1-1½
95 ½	96-97 ½	95 ½-97	97-98	97-98	96-97 ½	Denver	91 ½	92-94	92-94	92-94	92-94	6-6½	6¼-6½	6-6¼ + 2½
95 ½	97	a	97 ½	a	a	Detroit	91 ½	92 ½	a	93	a	6	6	6½ + 1½
96	96	96	97 ½	97 ½	96 ^f	Houston	92	91 ½-92	a	a	a	5¾ ^b -6¼ ^c	6-6¼	6½ + 1-2
96	94	94	96	96	93-94	Jacksonville	92	90-91	a	a	a	6	6½	6½ + 1½
95 ½	94	94	96-97	95-96	95 ½ ^g	Los Angeles	91 ½	90 ^b	90 ^b	a	a	6-6½	6.6-7	6 + 1½-2°
96 ½	97	97	97 ½	97 ½	97	Newark	92 ½	a	a	a	a	6	6	6 + 1½-2
97	99	99	99	99	99	New York	93	95	95	95	95	6	6	6 + 1
95 ½	95-96	94-95 ^b	97 ^b	a	95-96 ^j	Okla. City	91 ½	91 ½-92 ^b	a	91 ½-92 ^b	a	6-6¼	6¼-6½	6-6½ + 1-2½
96 ½	97-99	97-99	97-99	97-99	97-99	Philadelphia	92 ½	92 ½ ^b	a	92 ½ ^b	a	6	6	6 + 1
95 ½	96 ½ ^k	96 ½ ^k	97	96 ½	94	San. Fran.	91 ½	a ⁿ	a	a	a	6-6½	6.6-7.2°	6-7 + 1½-2 ^b
96	93-98	94-98	96-98	95-98	95-97 ½	St. Louis	92	a	a	a	a	5¾-6½	5¾-6.6	6-6½ + 1-2½
96 ½	96 ^b	96 ^b	97-98 ^b	97-98 ^b	96-97 ^b	Wash., D.C.	92 ½	91 ^b	91 ^b	92 ^b	92 ^b	6 ^b	6 ^b	6 + 1½-2 ^b

*3% down of first \$13,500; 15% of next \$2,500; 30% of balance.

SOURCES: Atlanta, Robert Tharpe, pres. Tharpe & Brooks, Inc.; Boston, Robert M. Morgan, vice pres. Boston Five Cent. Savings Bank; Chicago, Murray Wolbach, vice pres. Draper & Krumer, Inc.; Cleveland, David O'Neill, vice pres. Jay F. Zook Inc.; Denver, Allen Bradley, asst vice pres. Mortgage Investments Co.; Detroit, Harold Finney, exec vice pres. Citizens Mortgage Corp.; Houston, Donald McGregor, exec vice pres. T. J. Bettes Co.; Jacksonville, John W. Yates, vice pres. Stockton, Whatley, Davin & Co.; Los Angeles, Robert E. Morgan, exec vice pres. The Colwell Co.; Newark, A. G. Pulis, pres. Franklin Capital Corp.; New York, John Halperin, pres. J. Halperin & Co.; Oklahoma City, B. B. Bass, pres. American Mortgage & Investment Co.; Philadelphia, Robert S. Irving, exec vice pres. W. A. Clarke Mortgage Co.; St. Louis, Sidney L. Aubrey, vice pres. Mercantile Mortgage Co.; San Francisco, Raymond H. Lapin, pres. Bankers Mortgage Co of Calif.; Washington, D.C., Hector Hollister, exec vice pres. Frederick W. Berens, Inc.

► Immediate covers loans for delivery up to 3 months; future covers loans for delivery in 3 to 12 months.

► Quotations refer to prices in metropolitan areas; discounts may run slightly higher in surrounding small towns or rural zones.

► Quotations refer to houses of typical average local quality with respect to design, location and construction.

Footnotes: a—no activity. b—very limited activity. c—commercial banks do very little mortgage lending in Texas. d—on 25-year, high quality loans only. e—S&Ls charging 2 to 3 point fees. f—97-97 ½ if 10% down. g—all minimum down loans to FNMA. h—commercial banks only; S&Ls charging 7.2 to 7.5% plus 3 points. j—for better quality loans only. k—very thin market; life companies only buyers. m—some at 5 ½, some at 5 ¾. n—no loans. w—six months construction loans unless otherwise noted. x—FNMA pays ½ point more for loans with 10% or more down. y—FNMA net price after ½ point purchase and marketing fee plus 2% stock purchase figured at sale for 50¢ on the \$1. z—on houses no more than 30-years old of average quality in a good neighborhood.

NEW YORK WHOLESALE MORTGAGE MARKET

FHA 5¾s

Immediates: 93-94

Futures: 93-94

VA 5¼s

Immediates: 90 ½-91

Futures: 90 ½-91

FHA 5¾ spot loans

(On homes of varying age and condition)

Immediates: 90 ½-92 ½

Prices for out-of-state loans, as reported the week ending Nov 20, by Thomas P. Coogan, president, Housing Securities Inc.

Note: prices are net or originating mortgage broker (not necessarily net to builder) and usually include concessions made by servicing agencies

FNMA STOCK

	Month's		Month's	
	Oct. 13	Nov. 13	low	high
Bid	56	57 ½	56	58 ¼
Asked	58	59 ½	58	60 ¼

Quotations supplied by C. F. Childs & Co.

In the next three pages...

SCHOLZ
NORTH AMERICAN HOMES
Announces...

THE NEW '60 SERIES

- 1 **8% Reduction in Package Prices...**
(1960 North American Models)
- 2 **Proven Subcontract Build Out Prices in Major Marketing Areas...**
- 3 **Available Anywhere from the Nation's Only Complete Plant Network...**

Sparked by the production from eight nationwide plant locations, the past year has seen the greatest sales expansion in the history of North American Homes.

This dramatic rise has permitted a drastic reduction in costs of production. This coupled with many ingenious site cost cutting techniques here being employed for the first time, make for some of the most competitive final build out costs in any market.

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TOLEDO 7, OHIO

PLANTS IN: Toledo, Ohio • Wilmington, Del. • Durham, N. C. • Palm Beach, Fla.
Kansas City, Kans. • Greeley, Colo. • Houston, Texas • Long Beach, Calif.

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LOW COST
HOUSING NEWS
OF THE YEAR!**



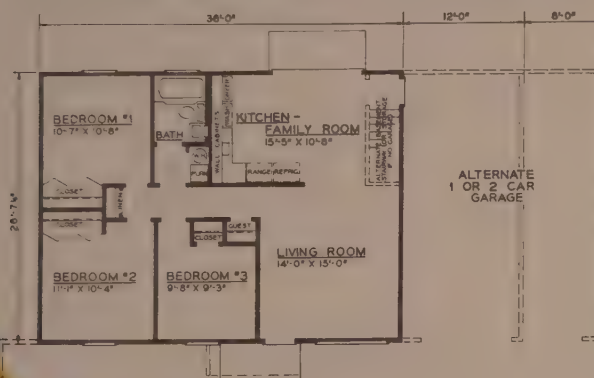
THE '60 BRENTFIELD

957 sq. ft. living area

3-Bedrooms

1-Bath

	Detroit	Los Angeles	Miami*	Washington D.C.	Denver
TOTAL HOUSE COST (SLAB)	7,104	6,420	7,378	7,453	7,087
Building Cost per Sq. Ft.	\$7.42	\$6.71	\$7.71	\$7.79	\$7.41
Add for Basement	1,335	—	—	1,540	1,410
Add for 2-Car Garage	1,075	910	1,105	1,235	1,135



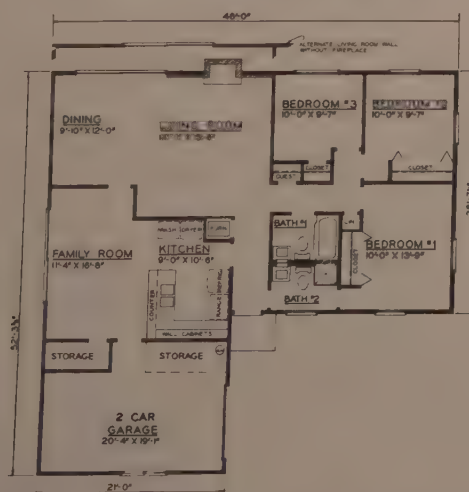
THE '60 FIESTA

1311 sq. ft. living area

3-Bedrooms

2-Baths

	Detroit	Los Angeles	Miami*	Washington D.C.	Denver
TOTAL HOUSE COST (SLAB)	8,830	8,177	8,654	9,571	9,134
Building Cost per Sq. Ft.	\$6.74	\$6.24	\$6.60	\$7.30	\$6.97
Add for Basement	1,800	—	—	2,050	1,810
Add for 2-Car Garage	1,075	910	1,105	1,235	1,135



SCHOLZ HOMES, INC.
TOLEDO 7, OHIO

THE '60 FIESTA

1423 sq. ft. living area
plus 400 sq. ft. 2-Car Garage

3-Bedrooms

1,2 or 3-Baths



PLANTS

1960 housing fight again may make FHA hostage for subsidy programs

Next year's Congressional ruckus over housing legislation will involve almost entirely the big subsidy programs like public housing, college housing and—perhaps—urban renewal.

FHA will need more insuring authority, and Congress has prohibited the agency from stretching out its power to stay in business by resorting to agreements to insure. So the prospect again is for money-making FHA to become hostage for costly and controversial programs which produce only a tiny fraction of the nation's housing.

Both the Senate and House housing subcommittees will also tackle how tight money affects housing. But Washington insiders doubt that any legislation will result in 1960. It is an election year and chances are the session will be short. Best bet: the subcommittees will lay groundwork for a major housing law in 1961.

Chairman Albert Rains (D, Ala) of the House subcommittee is predicting major legislation in 1960 "with special emphasis on mortgage financing and urban renewal." But this is the time of year when Rains is often full of big predictions. Chairman John Sparkman (D, Ala) of the Senate subcommittee is dubious. His subcommittee will resume its postponed study of the mortgage problems of the '60's (see below). He wishes Congress would act on a central mortgage bank next year, but looks for a simple bill extending the public programs.

Sparkman told HOUSE & HOME he sees no need for more public housing authorization next year. The 37,000 units Congress authorized this year have no deadline, and chances are only a few will get under contract.

If this picture is upset at all it will be by one or more of three longshots:

Another FNMA Program 10: Rains is already warning that if housing starts continue to fall he will ask another subsidy program like the \$1 billion bonanza Congress enacted in 1958 as an anti-recession measure.

Rains chose an improbable place to outline his logic—the American Bankers Assn convention. Speaking to the savings & mortgage division, he cried: "You cannot expect the Congress to stand idly by and watch while monetary policy undercuts housing policy, while unsound financing practices spread and while a key industry is thrown into a decline which may sow seeds of another recession."

Sparkman told HOUSE & HOME that he has felt strong pressure for another Program 10 but he commented: "I frankly would hate to see us forced into it. The problem can be handled other ways." His suggestion: a central mortgage bank.

One industry spokesman doubts Congress would approve another \$1 billion builders' bonanza, is sure that President Eisenhower would make his veto stick, anyway. "Congress can act," he says. "But the conditions are not the same as they were in 1958. There is no recession to justify the program." President J. Stanley Baughman of FNMA says flatly: "We don't want any more money; we hope we don't get it."

Central mortgage bank: Sparkman favors it but adds: "I don't know whether I could get it through this year." Rains has promised only to study it. Still unknown: where the Administration stands.

A subcommittee staffer who doubts Congress will vote a central mortgage bank this

LIFE—Ed Clark



SPARKMAN

Lawrence Victor



RAINS

year explains: "We might have gotten it in 1960 if we could have gotten more done this year. But with the foul-up over the 1959 Housing Act we don't have enough time to get something as major as this through when you figure the hearings and debate that must come first."

VA rate boost: Democrats controlling Congress oppose another boost. Says Sparkman: "Twice now we have raised the rate [the last time to 5¼% in July] and had the lenders tell us, 'This will do the job.' The results have been disappointing. Now we

find it has not helped at all." (As usual, Sparkman overlooks what happened to the cost of money while Congress dallied.)

Rep Olin Teague (D, Tex), chairman of the House veterans affairs committee, also opposes another rate boost—as usual. But he says he supports another extension for World War 2 vets—whose eligibility expires next July—in hope that someday interest rates will slip enough to put VA back in business.

But a committee staff member forecasts: "If the Administration asks for an interest rate increase and puts a lot of pressure behind it, there is still a chance it will pass."

The Senate housing subcommittee has been working for a year on a proposed bill aimed at giving housing the financing tools to cope with the expected boom of the '60's. It has 30 papers from housing experts, economists and others outlining specific problems and possible answers.

The staff's recommendations will be announced next month. But Sparkman has already given a few clues as to what the recommendations (in bill form) will be, both in a speech to NAREB and in an interview with HOUSE & HOME.

Besides a Central Mortgage Bank for FHA and VA loans the proposals will ask for a secondary market for conventional loans to attract new investors into the home mortgage market. A change in the FHA insurance premium will be proposed. It may be a cut. But Sparkman suggested it could be left unchanged, with FHA instead required to assume greater risk through longer maturities, lower down payments or easier borrower credit. He also indicated he will call for new and greatly expanded housing research.

Asking support for these ideas, Sparkman remarked that he prefers to minimize federal loan and grant programs but he warns: "We must find other answers or be willing to accept ever increasing participation [in housing] by the Treasury."

Voters clobber metro government

Efforts to create metropolitan governments in major US cities are still failing except in Miami.

St. Louis and Cleveland voters rejected areawide government proposals in November. But Miamians beat down another attempt to dilute the authority of their metro government—the third political attack the two-year old system has survived at the polls.

Key opposition to metro government in St. Louis and Cleveland (and Miami) came from entrenched local officials fighting for their duplicating jobs. Their allies: fears of higher taxes and suburbanites' distrust of the central city.

St. Louis and Cleveland exemplify the view of ACTION's big study of housing (H&H, Oct. '57), which contended that racial, social and political cleavages between city and suburb are so great citizens are unlikely ever to vote themselves into the same polyglot community.

Miami has one big advantage: 80% of its residents are comparative newcomers. They feel no special loyalty to any town, vote instead for the plan they think will best help solve their many city problems. In the latest vote they rejected proposals to make the offices of sheriff and tax collector elective rather than appointive. Editorialized the Miami Herald after the bal-

loting: "Again and again and again the people have demonstrated they want no tinkering with the organic law of metropolitan government."

Voters in Cleveland and the rest of Cuyahoga County rejected a county charter to let a beefed-up county government take over sewage disposal systems, planning, roads, traffic controls, public welfare, public transportation, ports, civil defense, air and water pollution and garbage disposal.

The Cleveland plan was heavily opposed by city Negroes—25% of the city's population. They have a strong voice in the city (with eight of 33 council members), feared the white suburban vote would weaken their overall political strength.

The St. Louis plan would have given the county government control over traffic, transit, sewers & drainage, economic development, land planning, some police administration and civil defense.

Builder Charles F. Vatterott Jr headed the board of freeholders which drafted the plan, though he personally opposed the final recommendation. But he did not fight it.

Vatterott considered it too limited. He says: "By rejecting the wrong solution, voters have opened the way for the right solution: consolidation of St. Louis and St. Louis county into a unified urban community."

NEWS continued on p 66

Value-conscious builders select

Brown & Kauffmann, northern California builders, sell 304 homes a year by stressing quality and more value per dollar!

Because they believe in offering the "best homes for the money", Brown & Kauffmann have achieved, in a few short years, a position of leadership in the building of quality homes in volume. The large development (shown at right) in northern California's finest new residential area is an outstanding example. Convinced that only by offering the buyer more value for his dollar could they expect continued growth and success, they have stressed quality throughout their wide selection of 5 basic, beautifully-designed, national-award winning homes. These value-packed complete homes, with 3 or 4 bedrooms and two baths, range in price from \$20,000 to \$25,000.



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Knowing the importance of the kitchen and its appliances in influencing and closing the sale of a home, Brown & Kauffmann have emphasized quality and efficiency in the all-important "center" of the home by installing RCA WHIRLPOOL appliances.

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For better looking, better performing, sure-to-satisfy kitchens install RCA WHIRLPOOL appliances. (1) Built-in gas or electric ovens (2) Built-in gas or electric cooking tops (3) Disposers (4) Dishwashers (5) Gas or electric refrigerator-freezers. Also available: automatic washers, gas or electric dryers, gas or electric washer-dryers and air conditioners.



Whirlpool appliances



Many other builders, in all sections of the country, know from experience and thorough testing the worth of RCA WHIRLPOOL appliances in helping sell homes. Their reputation for quality and ease of operation have real appeal to housewives. This complete line of built-in and free-standing appliances, in gas and electric models, offers real benefits to the builder. Each product is engineered for fast, easy, economical installation. All are available from one supplier who provides expert planning assistance, merchandising aid and fast delivery. Priced-right, RCA WHIRLPOOL appliances give dependable, trouble-free service and complete customer satisfaction.

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For the package deal at a package price...it's RCA WHIRLPOOL!

Give renewal aid to poor cities only, realtors ask

'Private enterprise can do the job better,' says Udall.

'No city strong enough for whole load,' retorts URA

Even though the Eisenhower Administration is moving to tighten up on federal spending for urban renewal and public housing (*see p 74*), leaders of the Natl Assn of Real Estate Boards argue the nation is still subsidizing too much.

This clash of views was aired at NAREB's 52nd annual convention last month in Toronto. "Only in case a community is so poor it can't afford a slum [clearance] or low-income housing program should the federal government get in," contended NAREB President James Udall. "Urban renewal aid should not go to cities that can pay."

HHF Administrator Norman Mason and URA Commissioner David Walker (the latter addressed *two* NAREB sessions) dissented sharply. Said Mason: "I don't think that a city that has been prudent and worked to preserve itself should be penalized if it wants help, while another that has done nothing should be rewarded." Walker added he does not think any city is strong enough to cope with urban renewal without aid.

Udall, a peppery Los Angeles realtor who flies his own airplane, called urban renewal the greatest challenge left for the nation's 66,000 realtors. He said: "We have been active in providing housing for those who desire it and should have it . . . We have proved that private enterprise can handle this better than any agency of government—at any level higher than local government."

However good, bad or indifferent a job private enterprise is doing at housing, the Udall philosophy found few echoes among other convention speakers. The concensus, indeed, seemed to be that private efforts had better be vastly improved lest public demand persuade Congress to intervene with ever bigger and costlier programs.

"If our people do not voluntarily reduce their consumption of capital for items less essential than housing," warned Sen John J. Sparkman (D, Ala), chairman of the Senate housing subcommittee, "the result will cause our people to demand action by the government. I do not want this to happen and you do not want this to happen [but] we would be very foolish to suppose that our society will long tolerate the costly and unhealthy conditions which characterize our urban and rural slums . . . The question

before Congress is not whether to take action, but what action to take."

URA Commissioner Walker chided realtors for talking about rehabilitation and conservation, but not doing enough about it. "So far," he noted, "no sure techniques have been evolved . . . to take in a designated neighborhood and for a justifiable total investment, upgrade all the sound but antiquated houses so that they can compete in the market." He revealed URA is beginning to pressure cities to appoint a market analyst at the same time they appoint a planner to devise renewal schemes. Cities that don't will have trouble getting renewal projects approved, he hinted. Reason: too many renewal projects have left cities with acres of cleared rubble for years before a project sponsor could be persuaded to re-build.

President James W. Rouse of ACTION, a Baltimore realtor and mortgage banker, complained: "We don't really expect our cities to be made livable. We seem to be anaesthetized to the filth and dirt and grime."

Despite all the sharp talk, NAREB's policy statement on urban renewal was mild. Mostly, it reiterated the 1958 statement, but added

a paragraph which more strongly urged use of "the greatest feasible scope to the curative power of rehabilitation . . . resorting to the more costly and slow-moving process of total clearance with complete redevelopment only in those exceptional areas of extreme deterioration that will respond to no other treatment."

In other policy moves NAREB:

- Urged amendment of the Employment Act of 1946 to "give equal stress to price stability as well as maximum employment as primary objectives of national economic policy."

- Urged Congress to let FHA use up to 35% of its earnings from fees, charges and insurance premiums for administrative expenses.

- Asked Congress to remove the statutory 4¼% interest rate ceiling on long-term government bonds "to reduce inflationary pressures." (President Udall called this a practical immediate step to ease tight money, though "the only basic solution is to have a free interest rate.")

- Urged that FNMA be freed, like the Federal Reserve, from Administration control. "Its secondary market operations cannot function effectively unless it is divorced from the HHFA and freed from Treasury control of its public borrowings," declared the realtors.

- Supported—instead of public housing—direct assistance to low-income families through local, state or federal welfare agencies of housing for dependent families.

- Commended HHF Administrator Mason for undertaking a study of public housing, expressed confidence he would find "clear and unmistakable evidence that the social evils generated by public housing have aggravated rather than alleviated the economic and social problems which spawned the public housing program."

- Opposed catch-all laws for housing legislation—a device by which so-called liberals use self-supporting FHA as a hostage to get costly programs like public housing continued.

- Asked a number of tax breaks including amendment of subchapter 5 of the Internal Revenue Code so real estate corporations with more than 20% income from rents can elect not to be taxed as a corporation.

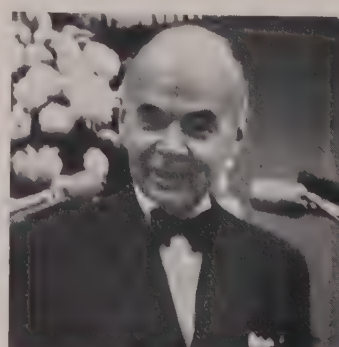
- Supported keeping in the public domain lands for parks, national monuments, forests for watersheds, but urged that public lands in the way of urban development and suitable for it be disposed of to private ownership; opposed legislation which would take over several areas for shoreline national parks.



RIFT WITH BUILDERS was revealed by NAREB President James Udall, who criticized builders for backing housing measures realtors think inflationary: "We look ahead for more than just a year in our association . . . We want a sound, solid, growth . . . not a soggy, soft one." Of NAHB, he said "We hope and think they will change."



MORTGAGE OUTLOOK panel was headed by Washington (D.C.) Realtor Oliver Walker who predicted an adequate supply of money in '60. He supported Economist Miles Colean's forecast that the steel strike and seasonal slack would ease demand for money in the first half, but recovery from strike would cause tightening in the second half.



QUALITY HOUSE, theme of NAREB meeting, was explained by panel led by HOUSE & HOME Editor & Publisher P.I. Prentice. He said: "If realtors can learn to sell quality houses I think you will double your market for old houses. Every time a quality house is sold, 7 or 8 families move . . . Each is a potential house sale for you."



LICENSING LAWS for realtors have been enacted by all 50 states, reported Realtor Robert Semenow. But, said Semenow, "Compared to law and medicine, real estate has a long way to go in educational requirement (eg some states require more formal training to license barbers than they do to license real estate brokers.)"

Photos: H&H staff

Discount gouging, kiting of contracts condemned

Realtors are so disturbed by discount-gouging by a few of their number that they have adopted a policy statement against it.

One reason: while he was their guest, FHA Commissioner Julian Zimmerman warned in a private session with some leaders that unless the abuse is halted, FHA might re-impose controls on discounts, fees and commissions. Typically, the practice involves charging borrowers more points than necessary to place the loan, then keeping the excess as profit, often split with the mortgage broker.

Realtors believe they are justified in quoting a point or two over the market when committing ahead, to cover themselves. But most agree that the points a few bad apples have charged are well in excess of this. "The insidious thing is that you find it everywhere," says one NAREB leader.

How can NAREB stamp it out? "When the offending party is a realtor, we want the members to bring him up before a real estate board on charges of unethical practice; if he is a mortgage banker, bring him up before his association. And we hope that the ones who are neither can be made to feel public disapproval," says the NAREB leader.

One problem: the market for FHA loans in many areas now is so thin that even the best information gives brokers only a vague idea of what the price of an FHA or VA loan should be (they say).

At last—Armel Nutter wins presidency

C. (for Charles) Armel Nutter, 59, bespectacled and soft-spoken Camden (N.J.) realtor who looks like a cashier (and once was) bounced back from a two-year-old rebuff to become NAREB's president-elect.

Nutter, who says his hobbies are "work—and damn little golf," campaigned so hard for the NAREB presidency in 1957 that the effort backfired and his good friend, H. Walter Graves of Philadelphia, was nominated. Nutter's gesture in seconding the nomination to forestall a floor fight is still remembered by his friends, who say he was a shoo-in this year.

Nutter has probably held more big jobs in NAREB than any other president-elect. He has been a member of its executive committee for ten and finance committee for six years. He has been treasurer, chairman for national membership and realtor public relations, a regional vice president. His quiet manner belies his reputation as a flamboyant platform speaker who likes to use gimmicks like bursting balloons to make a point.

Born in Milford, Del. he attended the University of Delaware where he majored in business, captained the baseball team and worked as headwaiter in a college dining hall. In 1923 he went to work for the Bell Telephone Company in Philadelphia, became cashier of the central district. Then he joined a Camden attorney and mortgage broker where he managed \$19 million in mortgages until 1931, when he and his brother Harold opened their own office, Nutter Mortgage Service. In 1946, the company opened a Philadelphia office.

Nutter calls his office "a balanced operation." It offers complete mortgage service, represents 11 life companies plus a real estate brokerage, appraising, management. "But we do no building. We're small, but



SELLING FOR BUILDERS panel was told that biggest hurdle realtors face is convincing builder it is profitable for him to use a broker. Said St. Louis Realtor David P. Leahy (standing): "The biggest problem is getting the full commission from builders. The best way is to have the builder dependent on you in some way financially." His suggestions: finance land purchase or arrange building and permanent loans.

Another disturbing practice which has faded in the past few months with the advent of tight money is kiting of contracts by brokers whose clients don't have enough cash for a full down payment. In kiting, a loan is arranged on the basis of a false contract showing a higher sale price; thus, the buyer gets a bigger loan than he should, needs less cash. Chief victims are S&Ls. In small communities, say realtors, they seldom make adequate appraisals. Sometimes lenders encourage the practice in order to make loans when they have plenty of cash.

The practice has cropped up most recently in Tennessee, New Jersey and North Carolina. Realtors fear a major scandal if the Federal S&L Insurance Corp decides to check some S&L files.

Cut government costs by 5%, realtors urge

NAREB, which last year launched a major campaign to get its members active in politics, has switched back to kitzing the politicians' game.

Purpose: to find economies that will permit a 5% per capita reduction in the cost of government—on all levels—during the next fiscal year.

Outgoing President James Udall proposed the idea in his keynote speech. By the end of the Toronto meeting, it occupied the top spot in NAREB's 1960 policy statement and marshaling of the troops was under way.

Said Udall: "I am not calling for another blind crusade . . . damning every public servant as a tax eater . . . Nor do I believe . . . in trying to run a civilized nation of 180 million people with the budget of George Washington."

What he did call for, and what the convention produced, was a plan to form realtor committees recruited from NAREB's 66,000 members in 1,325 locals to "sit down with their mayor, department heads and councilmen in a dedicated effort to prune out the fat without curtailing services." Similar committees at state and federal levels are planned. Behind the idea: Udall's conviction that measures "beyond legislation" are needed to realign the nation's money problems, that "legislators have been hamstrung . . . a lot have been misled by some small vociferous groups . . . [to think] that the people of the US want more giveaways, federal aid, intervention. I don't think so. The people want to get back some of the freedoms they gave away."

IRS flops in test suit on multiple listing tax

A technical blooper has forced the Internal Revenue Service to drop its celebrated test case against the West Contra Costa (Calif.) Real Estate Board for income tax on 1953 profits of the board's multiple listing service (May, News.)

The case, pending four years in US Tax Court, was docketed for Sept. 28 hearings. Just beforehand, redfaced IRS lawyers turned up to stipulate that, since IRS had since established Jan. 1, 1958 as a cut-off date for all boards operating multiple listing services, the 1953 case was automatically cut off.

Executive Vice President Eugene Conser explains that this will let NAREB tax lawyers concentrate on a brief being prepared for a conference with IRS officials, instead of having to worry about the case itself.

NEWS continued on p 70



NAREB'S NUTTER
Two years in the wings

not too small, and yet not too big," says Nutter, who has 26 employees. His son, C. Armel Jr., runs the Philadelphia office, while brother Harold runs the Camden office. When he is at home, Nutter spends a half-day in each office. But he is just winding up a term as president of the International Society of Residential Appraisers, traveled 15,500 miles in the four weeks before his election in Toronto. He has also held a number of offices in the Mortgage Bankers' Assn., is currently rounding out 13 years as a member of MBA's board of governors, has held top state and local offices in both realty and mortgage banking groups. He is a member of NAIIB.

How much time does he think he will spend as NAREB president? "About half my time. They tell me it will take more, but I have a business to see to, and I think I'm a little more experienced. Maybe I can organize it a little better."

Another new development using

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*Here's
the
Inside Story...*

dishwashers wear a coat of Geon

The tub, door lining, and racks of this new dishwasher are coated with a soft, resilient, and colorful Geon polyvinyl material. It treats housewives—and their dishes—more kindly than ever before. Yet it is tough and abrasion resistant—tests show it will outlast other coatings by two to three times.

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Sales and earnings for some of the biggest producers for the first nine months in 1959, compared with the same period in 1958:

COMPANY	'59	%	%	Cement			
	SALES (MILLIONS)	CHANGE SALES	CHANGE NET				
<i>Lumber</i>				Lehigh Portland	65.4	+13.9	+ 41.0
US Plywood ^a	\$ 72.2	+35.3	+ 94.7	Ideal	84.1	+17.2	+ 19.3
Weyerhaeuser	351.7	+13.5	+ 27.9	Penn-Dixie	40.4	+12.1	+ 21.3
Georgia-Pacific	140.5	+24.5	+ 66.9	Lone Star	80.4	+ 9.1	+ 20.6
<i>Wallboard, roofing, tile</i>				Alpha Portland	31.0	+25.4	+ 57.1
Celotex ^b	55.2	+16.7	+ 92.3	General Portland	51.3 ^f	+19.4	+ 15.1
Masonite ^c	71.8	+21.6	+ 28.7	Marquette	44.2	+11.0	+ 15.5 ^d
Ruberoid	97.9	+ 8.1	+ 41.9	Permanente	59.3	+22.2	+ 21.4
US Gypsum	232.3	+17.0	+ 20.8	<i>Hardware</i>			
Johns-Manville	278.2	+14.6	+ 44.3	American Hdware ...	32.2	+10.0	+ 27.4
National Gypsum	173.5	+18.0	+ 41.7	Yale & Towne	102.6	+19.6	+ 50.8
Flintkote	169.7	+17.5	+ 36.0	<i>Appliances</i>			
Armstrong Cork	219.2	+20.0	+ 60.0	Carrier ^b	195.7	+ 1.6	— 1.1
Congoleum-Nairn	37.4	+12.6	^d	Westinghouse	1,408.0	+ 1.7	+ 14.7
Certain-Teed	77.2	+16.5	+146.3	Minneapolis Honeywell	273.8	+17.4	+ 40.4
Philip Carey	55.9	+13.1	+127.3	Whirlpool	327.2	+10.2	+128.9
Bestwall	30.7	+22.4	+ 23.6	Worthington	131.2	— 4.3	— 23.6
<i>Heating & plumbing</i>				Gen Electric	3,142.3	+ 5.4	+ 17.0
American-Standard ..	299.6	+16.0	+101.3	Maytag	93.5	+25.5	+ 68.9
Crane	238.4	— 3.9	+180.4 ^e	<i>Glass</i>			
Trane	62.0	+ 1.8	— 17.2	Pittsburgh Plate	446.2	+11.4	+ 37.3
				Libby-Owens-Ford ...	^b	^b	+280.1
				American-St Gobain .	24.4	+42.3	ⁱ

^a First 3 mos of fiscal year ending Apr 30, '60.
^b First 9 mos of fiscal year ending Oct 31, '59.
^c Complete fiscal year, ending Aug 31, '59.
^d Deficit of \$1.96 million for first 9 mos of '58; net income of \$546,837 for first 9 mos of '59.
^e Includes non-recurring capital gain of \$577,000; excluding this, earnings would be +147.2%.
^f All figures revised to include Consolidated Cement Corp, merged Apr 30, '59.

^a Does not reflect tax savings from the larger end-product depletion allowances granted in recent court cases. If added, would show earnings as +46.2%.
^b Company does not disclose sales figures on quarterly basis.
^c Deficit of \$346,250 for first 9 mos of '58; net income of \$435,507 for first 9 mos of '59.

3rd quarter great, 4th doubtful

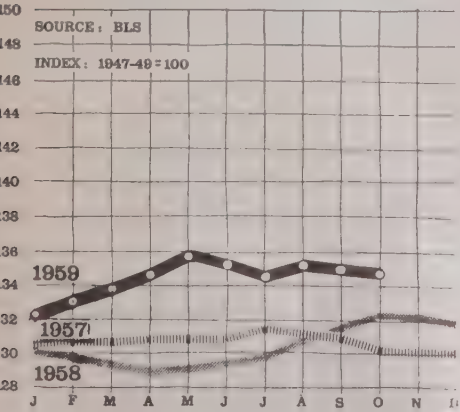
Building materials producers rang up record sales and earnings in the third quarter—but the fourth quarter picture may not be nearly so good.

The steel strike was producing slowdowns in some materials industries in November. Coupled with the slide in housing starts, a fourth quarter drop in sales for many producers seems unavoidable. Says President R. S. Gerstell of Alpha Portland Cement: "Buildings can't go ahead and it's going to hurt us from now on."

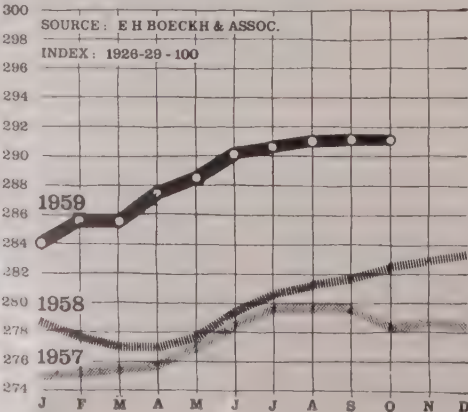
Alpha was one of the producers which set an all-time third quarter net. Some others: US Plywood, Flintkote, and Westing-

house. Several others reported nine-month sales and earnings this year the highest ever. Among them: Ruberoid, Armstrong Cork, Masonite and Johns-Manville.

Among 38 companies covered in a HOUSE & HOME survey, sales and earnings gains from the third quarter of 1958 to the third quarter of 1959 were reported by 34. The big lumber and plywood producers, paced by US Plywood, showed the best average gains. Close behind: wallboard, roofing and tile manufacturers and cement producers. Appliance makers on the whole showed the smallest percentage gain in sales but there were some staggering increases in earnings.



MATERIALS PRICES slipped a miniscule 0.1% in October to 134.9 (from the 135 revised index of September). BLS attributes the dip to falling lumber prices. The index is now 0.8% below its 135.7 all-time high in May.



BUILDING COSTS were unchanged in October according to Col E.H. Boeckh, the index remaining at 291.1. In 20 cities he checks Boeckh found only one change in labor wages and no changes in materials prices.

MATERIALS BRIEFS

Strike may pinch yet

Housing may still feel the pinch of the steel strike after the first of next year.

It will be the last and least affected segment of the construction industry, say manufacturers. Up to now, inventories have been enough to keep homebuilders supplied in a normally slack season with the major house elements that demand steel: furnaces, major appliances, water heaters, bathtubs, prefab chimneys.

But by next month, materials men predict, the gap in the steel pipeline from mill to house may create severe shortages. Says John Norris, president of Lennox Industries: "The first quarter of next year will be rough for everything made of steel. January will be very rough; February and March will be troublesome."

A Pittsburgh steel man agrees: "From a customer's point of view the steel situation will be chaos until March." Though the Supreme Court ordered the workers back to work for 80 days under a Taft-Hartley injunction Nov 7, steel production is not expected to reach capacity until early December and perhaps even later.

In late November, many house parts—reinforcing rods, nails, hardware—showed few signs of trouble. Reasons: imports could move in to fill any vacuum, and they are "remade" (i.e., from scrap) steel. But other ill omens were beginning to appear. In the Midwest, builders who needed steel pipe for plumbing and service lines for residential gas heating, were beginning to hurt. Others were being forced to alternate methods or substitute materials to meet a shortage in I-beams and supporting posts for basement construction. US Gypsum reported a sharp pinch in all metal products and exhausted inventories in metal lath, drywall hardware, cold roll channels. National Gypsum cut back operations at its Niles, Ohio metal lath plant. Chairman Melvin Baker predicted the plant would have to shut down completely if the shortages continued to worsen. And shortages were affecting availability of steel-core electrical cable and sheet-steel electrical service entries.

Foreign steel and pig iron—only a trickle except for wire, reinforcing rods, nails and similar remake items—offers little help. For one thing, say producers, it's hardly enough—especially in view of competition from other segments of industry. For another, prices of sheet and similar broad-use forms are skyrocketing.

Aluminum eyes steel's markets

One industry benefitting from steel shortages, and providing some help to distressed builders, is aluminum.

Biggest activity is in sheet for ductwork. Aluminum's big three, Kaiser, Alcoa and Reynolds, are all doing their best to grab the market from so-far solidly entrenched galvanized sheet steel. Says one Kaiser executive: "Our salesmen are out to capture a major fraction of the market. Our best chance is in residential construction because most contractors in that field won't be stopped by steel shortages."

All three of the major aluminum companies have offered duct sheeting in the past, but at prices noticeably higher than galvanized. Now, all three have introduced a new product designed to compete with steel prices. Reynolds, for example, had a "competitively-

priced" (at 30¢/lb) sheet available to contract fabricators for a year. When the steel pinch hit, the company put the sheeting into the hands of its general line distributors. Alcoa has brought out a multi-purpose sheet ranging from 34¢/lb to 39¢/lb. Company men say the price is equivalent to the normal 10-11¢/lb for galvanized when differences in weight and volume are considered.

Another opportunity for aluminum has appeared in gutters and downspouts. Says A. H. Charlton, executive vice president of Quaker State Metals Co, Lancaster, Penna.

"Steel downspouts are just about out; practically every manufacturer in the country has exhausted his steel supply." Result: most are turning to aluminum. Charlton says his firm usually makes about half aluminum and half steel. Now, it is producing only aluminum, selling it even to customers who might otherwise have selected steel. But he believes the company will go back to the normal ratio of steel when it is available again.

Alcoa to make end products

Giant Alcoa is going into the fabrication of end products for residential use.

At the retail lumber dealers' convention in Cleveland, it showed first results: enameled aluminum gutters and downspouts.

Is this just the beginning of a major swing by Alcoa to making end-products for building? Industry onlookers figure it is (and Alcoa does not deny it—but doesn't confirm it, either). The company does point out that it finds producing its own gutters and downspouts is the only way it can do so at a price that will sell them.

On the way, predict insiders, are Alcoa-fabricated windows, siding, doors, fascia, soffits and other items.

FHA grade marking

FHA will require grade marking on all framing lumber used in FHA-financed houses—starting next April 1.

Commissioner Julian Zimmerman says this tightening of FHA minimum property standards is "to assure quality . . . and to protect the home buyer."

Twelve FHA insuring offices already require grade marking.* As for the other 63, Zimmerman noted FHA inspectors are not lumber graders and "should not be placed in the position of arguing with builders over grades." The delay until April 1 is to give lumber retailers time to replenish their yards with marked farming lumber. FHA will accept grade markings of any association or independent inspection agency qualified to grade-mark the species.

Lumber prices slide

Pacific Northwest lumber has been hit hard by tight money and the dampening effect of the steel strike.

Heavy production in good weather has built up stocks, but orders are thin. Plywood that sold for \$85 msf in spring and was in tight supply is now down to its recession low of \$64. Mill closures are considered imminent.

Unemployment and hardware shortages from the steel strike are partly to blame, say retailers and distributors. But the big cause is the high cost of mortgage money, which has cooled enthusiasm of builders.

*Camden, District of Columbia, Jackson, Jamaica, Little Rock, Memphis, Newark, New York, Philadelphia, Phoenix, Wilmington and Knoxville. Reno will require grade markings as of Jan 1.

VIEWS ON THE NEWS:

Some steps toward the 'new' housing industry of the '60s

By Gurney Breckenfeld

The year now drawing to a close may go down as the year when the housing industry joined the rush to the stock market. With increasing frequency, that neat daily compendium of securities' developments, the SEC News Digest, brings word of builders, developers, savings and loans, mortgage companies and other housing enterprises turning to the investing public for equity capital.

In the last year, no less than 20 issues have been, if not actually floated, at least proposed to the federal authorities for issuance. Several times that number have come before state authorities. Nineteen land development companies, for example, have registered with the Florida Securities Commission in the last eight months. In size, the issues range from the \$300,000 Builder Joe Eichler raised to buy and develop land (*June, News*) to the \$27 million Arvida sold to turn Arthur Vining Davis' huge south Florida landholdings into a public corporation. They seem to have one thing in common: as the stakes for operating in housing's big leagues get bigger and bigger, the stock market looks like a better and better place to raise the big chunks of capital.

Making a profit with somebody else's money is old hat in the housing business. But a look at a cross-representative section of the year's stock flotations gives an insight into how the leaders of a new trend are going about doing this a new way:

- A New York group including Vice President John Marqusee of the New York State Builders has just won SEC approval to sell \$750,000 worth of stock to finance speculative land acquisition in the New York suburbs. Northern Properties Inc., formed only last April, plans to develop some 634 acres in three counties, sell parcels to home builders and commercial builders.
- In southern California the Laguna Niguel Corp. (Boston Financier Gerald W. Blakely Jr., president) sold a \$9 million stock issue in April to buy and develop 11 sq mi of Orange County cattle ranch and beach. Plans drawn by Architect Victor Gruen call for a complete community in the path of the area's anticipated

population explosion.

- In Colorado, Midwestern Financial Corp. (H. Sanford Weaver, president) is seeking SEC approval to issue 250,000 shares to pay off loans which have created this agglomeration of housing operations: three Colorado and one Kansas S&L's, a Colorado mortgage corporation, a Missouri land development and home building corporation, a Kansas realty and abstract company and Home Security Industrial Bank at Colorado Springs.

- In Wisconsin, Mortgage Guarantee Insurance Company is seeking SEC approval to sell \$1,150,000 more stock—chiefly to mortgage lending executives—to finance its national expansion program (see p 56).

Will these major aggregations of capital bring more responsibility—and quality—to land development and the building, not just of good houses, but of quality neighborhoods? Some of them are making a big point of their aim to do just that.

Says President Gerald W. Blakely Jr of the Laguna Niguel project near Los Angeles:

"With this great mushrooming (of Los Angeles) there is a great deal of helter-skelter building and realty development and many formerly attractive areas have been ruined. Four and five houses have been cramped on an acre and the houses are built very badly with complete lack of planning. Traffic flow is not considered and the resulting traffic bottlenecks cause serious problems. Most of the people we have talked with in

California are looking for something better. This is the basis of our whole idea."

Says President Milton Weir of Florida's Arvida Corp: "We believe that a strong sense of community responsibility pays off for everybody, including our own company. The greatest danger appears to be inadequately controlled, haphazardly projected and circus-touted land developments, which could leave some areas in the future with poor zoning and substandard housing."

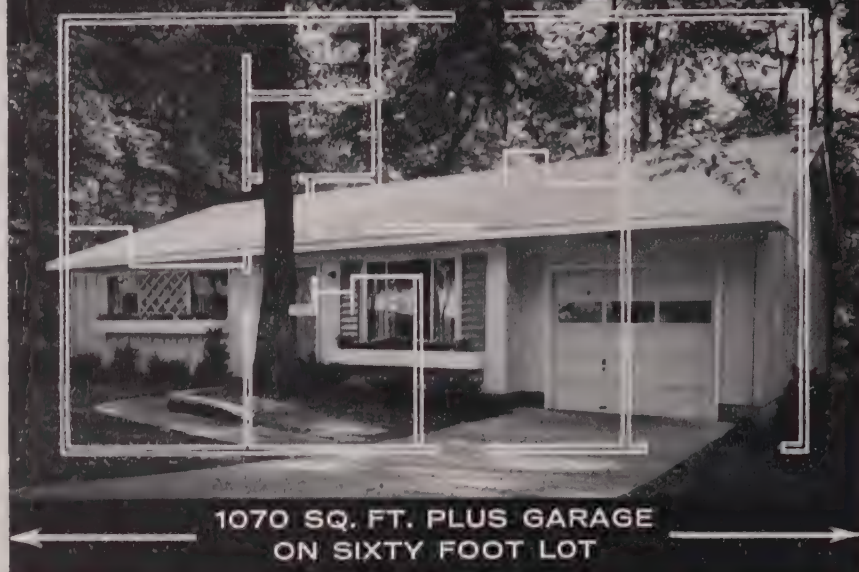
It is a bit early for weighty verdicts on the significance of all this. Some skeptics dismiss it as no more than a muted echo of the speculative fever that infested real estate ventures in the '20s—and so a harbinger of economic disaster ahead. There is also truth in the wisecrack that the tax laws of the nation—rewarding personal effort as little as they do—are literally driving the nation's investors into the ground. Much of the stock market rush is an effort by the public to cash in on speculative land profits. But I prefer to see it as an early symptom that the much-criticized housing industry at last is reaching out toward the managerial upheaval that must take place if it is to take full advantage of 20th century methods. Why?

Public financing means much bigger organizations. Many of them will be developing unincorporated areas, where the shackles of local controls (eg codes, unions, zoning) are minimal. Breaking through this web of interlocking and mutually supporting restraints is housing's No. 1 job in the next decade. The rush to the stock market may give housing a big boost in this direction, particularly if sharp promoters do not poison investors' trust by using public financing the wrong way.

NEWS continued on p 74

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Officials admit public housing, renewal have troubles; ask more \$\$ for both

Federal housing men are stepping up their get-tough drive against local stalling on public housing and urban renewal projects.

And they are pointing the accusing finger right back at housing and renewal officials who cry about HHFA-URA red tape, FHA foot-dragging, and Administration budget-balancing "at the expense of housing and renewal." In effect, top US housing men are replying: "Nuts. You haven't used half of what we've allocated you already. Shut up and produce." As is so often the case in arguments, there is at least some truth on both sides.

The hassel got a thorough airing in late October at the 26th annual convention of the Natl Assn of Housing & Redevelopment Officials in Cincinnati.

HHFA Administrator Norman Mason told the 1,400 delegates that PHA will refuse to sign annual contribution contracts for more public housing "where there are existing contracts that are stagnant." (There are 110,000 backlogged units, some over five years old; and the biggest offenders are the cities that raise the loudest outcry about Administration housing policies: New York with 17,177 stalled units, Chicago with 10,105 and Puerto Rico with some 9,000.)

PHA also will require applicant cities to have both an approved site and an alternate site before it will sign up to subsidize more housing projects, Mason disclosed. (*Even more drastic is a step PHA is still planning: stop making preliminary loans for public housing planning. This would force localities to put up the cash for architects' fees, or persuade designers to work on the cuff. Officials predict privately this will stop architects from promoting public housing projects, as some now do in the knowledge that Uncle Sam's preliminary loan will pay their fee promptly, even if the project is stalled for years or never built at all.*)

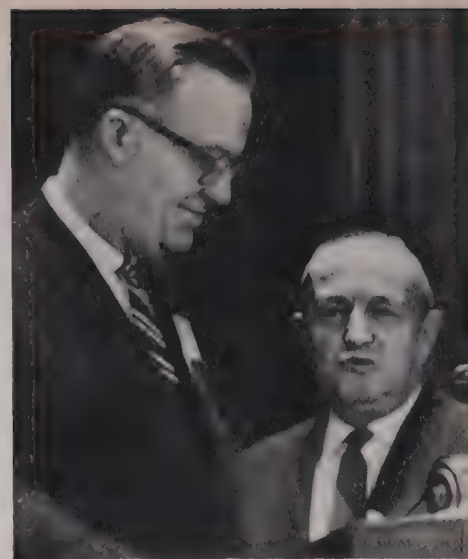
Both Mason and URA Commissioner David M. Walker—in sharper and sharper words—criticized local renewal officials for planning too long and building too little. "Too many cities have been too much concerned with acquiring new projects [ie, building a bigger renewal empire] while uncompleted ones gather dust and weeds. Businessmen tell me it isn't their fault—they say it is yours, and perhaps ours—that we make their overhead

costs go sky-high with delays," said Mason. Walker noted that only \$225 million has been spent of the \$1.3 billion authorized for renewal in ten years. "I'm not contending we are blameless," he told H&H, "but some cities have had their money for years."

FHA is falling down on its renewal job under Secs. 220 and 221, many a NAHRO-goer charged. Julian Levi, executive director of South East Chicago Commission which is leading a fight to keep Negro slums from engulfing the University of Chicago (*Jan, News*), cried that FHA has not even issued regulations from Washington to let local offices process 220s as co-ops although the 1954 law creating 220 contemplates this. (Retorts Commissioner Julian Zimmerman: "True, but we're working on it and anyway this is only a tiny part of the problem. And a 213 co-op should work just as well as a 220 co-op.") Levi steams because he has a \$72,000 rehab apartment sold and underway and FHA's Chicago office says it would like to, but can't, give him a 220 co-op commitment big enough to be more than a joke.

Charles P. Taft, former mayor of Cincinnati and brother of the late Sen. Robert Taft (R, Ohio), found friendly ears for a banquet address roasting the Eisenhower administration for footdragging, hypocrisy and lack of enthusiasm for housing and renewal. He landed hardest on the idea that cities and states can finance the whole job. Said he: "This is what we describe in the World Council of Churches as 'eschatological,' that is after the second coming."

On one subject, Administration officials and NAHRO leaders seemed in genuine accord: there *must* be much more and faster rehabilitation of aging homes and neighborhoods. This is a significant switch from five years ago, when many a local official poo-pooed rehabilitation as a phony fixup solution for slums. Now, NAHRO officially declares: "Neighborhood rehabilitation and conservation . . . involves by far the greatest number of people, the largest areas and most expenditures" in renewal. Adds blunt-talking Dave Walker: "If renewal becomes public housing at one end and semi-luxury housing at the other, with a great gray area in between, then it can go no place but into disrepute—and there it belongs." Local officials now realize this, too. Some of their jobs depend on keep-



NAHRO'S FARRIS, HHFA'S MASON
"Mutt & Jeff," quipped the Administrator

ing renewal popular. NAHRO also:

- Adopted a policy resolution calling for 1) a major new study of what's wrong with US housing policies, 2) an end to PHA's \$17,000-per-unit cost ceiling on public housing so bigger units can be built, 3) better legal enforcement of housing codes by cities, 4) more US money and 80% federal subsidy instead of 66% for renewal.

- Elected Charles L. Farris, 49, executive director of the St. Louis Housing and Redevelopment Authorities, as president to succeed John R. Searles Jr of Washington, D.C. A husky (6' 3½" 225 lbs) onetime athlete (basketball, baseball at Notre Dame) and grade school athletics coach, Farris got into renewal ten years ago when he became deputy director of the HHFA division that is now URA. He went to St. Louis in 1953 to run redevelopment; in '55 he also became executive head of the housing authority. His empire: 6,000 public housing units, three clearance & redevelopment projects totaling 700 acres. Last year, federal officials complain, race problems left him with 250 vacant public housing units. As NAHRO president, Farris plans to give top priority to the study of what's wrong with housing policies.

- Watched HHFA's Mason and NAHRO's Farris agree at the windup session to dig into what's wrong with housing policies together. "Your objectives as you outline them are ours," said Farris in a burst of friendship. Looking up at NAHRO's towering president, Administrator Mason drew a tension-melting laugh by wisecracking: "Mutt & Jeff."

Why welfare housing is failing: a fresh analysis

Rarely is a convention talk provocative enough to warrant more than a paragraph of distillation. Agnes E. Meyer's keynote speech to NAHRO is a document to remember, not only for its sweep but also for its courage in taking stands of social controversies implicit in public housing which politicians, pundits and professors usually fear to mention. Mrs Meyer, widow of Eugene Meyer, late publisher of the *Washington Post & Times-Herald*, is the author of "Journey Through Chaos" and "Out of These Roots." Long known for her blunt avowals of social causes, she says this of her NAHRO talk: "I have two advantages. I don't want any votes and I can't be fired from a job."

The problems—and Mrs. Meyer's solutions—largely her own words:



KEYNOTER MEYER

Needed: a shift "from quantity to quality"

Photos: H&H staff

Perspective: "Public housing is merely the extreme example of what is wrong with our chaotic, haphazard and unimaginative approach to the problem of providing our rapidly expanding population with homes that will permit every citizen to live a decent, fruitful and happy life. To achieve such standards our whole emphasis must be shifted from quantity to quality. The search for quality is the central problem of our mass democracy—quality in education, in literature, art, science, in public and private morality . . . If we do not pull up the living conditions of our underprivileged millions, they will pull us down."

People: "The philosophy of the period when the first [public] Housing Act was passed in 1937 was that good homes will make good

continued on p 78

How newspapers that try (few do) can prod cities into renewal action

When urban renewal experts meet, Chicago is often cited as the No. 1 city at fashioning new and sharper weapons to fight slums. One big reason why this is so is Chicago's daily newspapers. Instead of denouncing slums routinely (like sin) and letting their creators continue to haul in bootleg profits of human misery, Chicago's press has set a unique standard in US journalism for naming names, even where respectable firms or potent politicians are involved.

How Chicago newsmen's seven-year itch to do something specific about slum blight keeps the city stirred up was demonstrated afresh last month.

HOW REAL ESTATE LEECHES FEED ON RACE FEARS HERE, blared the headline in the Chicago *Daily News*. In a front-page story, the paper charged:

"Panic profiteers and real estate sharks are cleaning up on neighborhoods changing from white to Negro occupancy.

"Hard-boiled 'blockbusters', speculators, fear-spreading sharpies, Loop lawyers and even some reputable real estate firms are cashing in.

"They fatten on whites and Negroes alike—preying on whites' fears that 'the Negroes are coming,' and on the great need for housing of Chicago's fast-growing Negro population. The result is a real-estate boom, making it pay off to 'turn over' neighborhoods.

"Reporters learned that cynical scare dealers in these neighborhoods hound out whites, block orderly change and put the squeeze on Negro buyers. Sometimes they deliberately install Negroes on all-white blocks to 'bust' them and spread panic.

"Any chance to create an interracial neighborhood is undermined and the so-called Negro 'ghetto' merely is extended. And more whites make the costly flight to the suburbs.

"There is almost no one to stop the panic

peddlers, although Negroes and whites alike denounce them. City officials and other authorities, with few exceptions, do virtually nothing. The profits are high."

For racial friction, no policy

Thus, bluntly, the newspaper dragged into the open an issue most authorities and community leaders had been too squeamish to face. In a series of nine articles, it dissected the fate of a recently "busted" South Side neighborhood, named the panic peddlers who had busted it, described their operations and profits. Respectable realtors as well as shady brokers were accused of contributing to the neighborhood's disintegration. A numbers racket baron was involved in some deals. Late-night telephone calls, parades of real estate men with offers to buy (one resident displayed 93 calling cards gathered in three months), ominous predictions that owners would lose money if they didn't sell fast (often false, on the basis of later experience) were among the devices used to pry out whites. Land trusts conveniently shielded identities of some blockbusters. Other brokers were in legal troubles for swindling earlier clients.

Viewing the picture, the *Daily News* con-

cluded: "... one fact looms large. [The neighborhood] had no organized program to meet racial change. Neither does the city of Chicago, officially or unofficially." The result: by the time the series ended, at least one similarly threatened neighborhood was organizing to fight panic.

For hard facts, hard work

Behind the nine-day wonder lay five weeks' work by Reporter Harry Swegle and Writer Bill Newman. Swegle, a resident of Chicago's transitional Hyde Park area (*Jan, News*) had watched blockbusters operate, chafed at their success. He persuaded City Editor Maurice Fischer that a story was there, teamed up with Newman to interview residents of the test area, unravel tangled court records to trace sales and profits, track down the panic peddlers. During the last two weeks of their investigation, Veteran Reporter Jack Willner helped wrap up the story.

Such lavish (by city-room standards) investment of man-days in a housing story is nothing new to the *Daily News*. In 1953, it broke the city's slum story in a sensational series that showed slums being "created—deliberately and for profit." (*July '53, News*.) The project took full time of nine reporters, three photographers headed by Reporter (later Asst City Editor) Roy M. Fisher for two months, once prompted the paper's late, great City Editor Clem Lane to explode: "Dammit, Fisher, you've got more men working for you than I have for me." Since '53, the paper has printed five more major series, hundreds of individual stories on urban housing and blight. The subject is now an established "beat" with a regularly assigned man.

Says City Editor Fischer: "The constant pressure has kept city officials alert, with no opportunity to fall into lethargy. No sooner does that happen than we have another reminder staring them in the face."

PUBLIC HOUSING:

Builder sets out to show it costs \$5,300 a unit too much

Philadelphia Builder Joseph Singer is finally setting out to prove—at his own risk—what a good many builders have felt for a long time: that public housing, as it is commonly built, costs far more than it should.

If the experiment is successful,* Singer will complete 98 standard row-house units on a 6-acre public housing site on the city's far northwest side in about half the time it would take contractors working for the authority. Then he will sell the units to the authority at market price, or about \$5,300 apiece less than similar contract-built units.

Units will have three bedrooms, living & dining rooms, basement with garage and built-in laundry, tile bath and doors on all closets, sell for \$11,758 against \$17,000 for units put up in the past. Floor area is 1,054 sq ft (plus 527 sq ft for a basement garage) vs 1,150 sq ft for contract unit.

Key to the apparent saving is the fact that Singer is operating free of red-tape delays usual in public housing construction. Singer

bought the site from the authority at appraisal price of \$129,000, does not have to answer to anyone until he is ready to sell the project back to the authority. The big money saving is expected as a direct result of the time saving, plus elimination of advertising and commissions on the bulk sale. Singer expects to net his usual profit. The houses will, if anything, be roomier and

have more features than contract-built units, he contends.

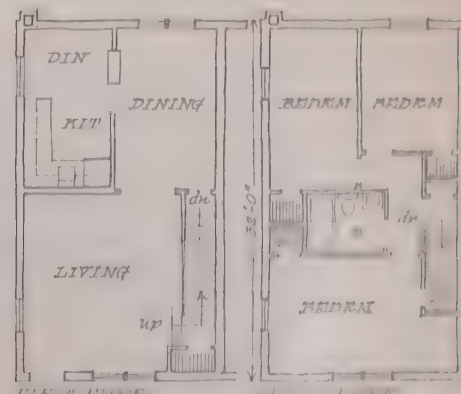
Singer's risk lies in the fact that, because the law requires competitive bidding on new construction, PHA has refused firm official approval (but displayed great interest, and unofficial approval) of the setup until the units are completed. If the deal

continued on p 78

Frederick A. Meyer



BUILDER SINGER, freed of red tape, already has first row of houses (rear) closed in, roofed.



FLOOR PLAN is standard-brand for Philadelphia row house 18' wide. One bedroom is 7'9" wide

*A taxpayers' suit contends that it would be unlawful for the housing authority to buy back houses built on land it has sold. Reason: state law lets authorities sell land only when it is "not needed for the purposes of the act."

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A model home in the Porter-Wagor-Russell, Inc. building project, Palmetto Country Club Estates, located near Miami, Florida. Inside plaster corners are reinforced with Keycorner lath for higher crack resistance.



"Our best selling homes are lath and plaster

Mr. Wagor, in front of one of his firm's model homes, talks over the advantages of Keycorner reinforcing lath with William Duncan, owner of the Duncan Plastering Company, Coral Gables, Florida, (right) and E. C. Faircloth, Keystone Steel & Wire Company building specialist, (center).





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...Porter-Wagor-Russell, Inc., leading Florida home-builders

"Reinforced-lath and plaster interiors are a big sales feature in our homes," reports Mr. F. B. Wagor, partner in the Porter-Wagor-Russell, Inc., builders of the large Palmetto Country Club Estates near Miami. "Best of all, it actually costs less to reinforce inside corners with Keycorner lath. You add value because of the high crack resistance and lower maintenance. Prospects are delighted with the lasting beauty of plaster. The hidden value of Keycorner reinforcement strengthens each sale."

Wherever Keycorner lath is used, it gives stronger corner reinforcement at less cost. Tests show that crack resistance of plaster corners is almost doubled as compared to other corner reinforcement.*

The pre-shaped, 4-foot lengths of Keycorner

fit into corners quickly and neatly. Keycorner can be nailed or stapled. Plaster flows in and around the open mesh design of Keycorner to assure a complete bond. Keycorner lath, packed 1,000 feet to a carton, is galvanized.

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falls through, Singer will be faced with selling the units on the open market.

"I would be at a disadvantage," he admits, "because it is hard to sell houses surrounded by public housing."

Because of this possibility, Singer is meeting FHA standards as well as PHA's. And he has an FHA commitment.

Here is how Thomas J. McCoy, acting executive director of the Philadelphia authority, foresees the savings:

MONEY SAVINGS

- Architect's fee (3½-4% of project cost) is eliminated.
- Contractor's "red-tape margin" of 10-15%, usually tacked onto bids, is eliminated.
- Interest paid by authority on planning money is reduced about 75%, interest for construction money is reduced "slightly."
- On-site overhead for authority (insurance, inspection) is cut.
- Administrative overhead in supervising project is eliminated.

TIME SAVINGS

Item	Contract	Non-Contract
Pre-preliminary site plan for PHA approval	4-6 weeks	At least 3½ to 5 weeks, or the time plans are actually in PHA hands in Washington, are saved, plus whatever Singer can save in getting the planning done.
Preliminary plans for PHA review and comment	6-8 weeks	
Architects' answers to comment, for review	2-4 weeks	
Final plans for PHA approval	2 weeks	
Bid-taking from construction, electrical, plumbing, heating & landscaping contractors (under state law)	4 weeks	
Actual construction	18 months	9 months*

(**"Authority contractors have little incentive to push for quick completion . . . use authority jobs as standby to keep their men busy," says McCoy.*)



OPEN-OCCUPANCY RENTAL project in Pittsburgh, first to open since the city adopted the nation's stiffest anti-race bias law, remains half vacant after five months on the market. The 209 units, financed under FHA Sec 221, rent from \$77.50 to \$97.50. Development was sponsored by Action-Housing Inc.

Project of 'codeless' homes planned

Pittsburgh, the once-sooty steel city where downtown redevelopment is a model for the nation, is getting ready to try to work a similar wonder with its housing.

The sophisticated essence of the matter is that the power structure of the city (which in Pittsburgh means Banker Richard K. Mellon and the industries that flow from the Mellon fortunes) has decided it will be done.

Housing isn't so simple as business and industry; housing on the local plane is enmeshed in regulations and restrictions, interwoven with social status and social frictions.

Pittsburgh is beginning (aside from a stumbling first step—see photo) with a unique demonstration of what technology could do to uplift everybody's housing—if local shackles were broken. Action-Housing Inc., a local group which takes its \$90,000-a-year budget from the Community Fund and its name and inspiration from the national blight-fighting group of similar title, is getting set to sponsor a massive demonstration of codeless home-building. It has:

- Raised the first \$300,000 (from Mellon foundations) of a proposed \$2 million non-profit development fund, patterned after the Cleveland Development Foundation, to provide temporary equity capital for middle-income housing and to develop and sell to builders the sites for it.

- Bought a 131-acre site—the last major area of vacant land inside Pittsburgh—for a 1,680-unit "experimental" community to try

out new technologies and materials without restraint from Pittsburgh's notably backward building, plumbing, zoning and other codes. (The city council has indicated it will approve the project.)

- Received a report from two of national ACTION's brilliant research men, Martin Meyerson and Burnham Kelly of Harvard and MIT, suggesting how to go about it. After interviewing 54 local experts, they reported Pittsburgh—with its codeless house project—has a chance to lead the nation to a "breakthrough in housing" which could "leapfrog over past impediments to technical solutions and capture the imagination of public officials and citizenry."

Why public housing fails

continued from p 74

people." But now we have learned that "however essential a good physical environment may be for every human being, it cannot of itself change living standards of families whose morals are the result of generations of deprivations, poverty and neglect. *Partial solution:* stop evicting over-income families from housing projects so they can help educate their neighbors.

Problem families: "If the voluntary or enforced retreat of all the reliable tenants willing to pay higher rents continues, public housing—especially in our larger cities—will become a dumping ground for all of our difficult

multi-problem slum families." Yet PHA rules force authorities to concentrate on "protection and upkeep of properties" to the neglect of tenant education. "Local authorities may not allow their staffs to provide face-to-face advice for tenants [or] direct social services. They may only "stimulate and coordinate public and private [welfare] services. But social workers from different agencies are experts at resisting coordination. Housing managers can get results only if a man beats his wife, gets drunk and doesn't pay his rent—by threat of eviction." *Solution:* increase housing authority staffs and "use some as the nucleus of a social service program." Savings in maintenance work and policemen should offset some of the cost.

Minorities: "To expect such families" (eg "immigrants from the South, Puerto Rico, from other cities or rural areas") "with a long background of deprivation to develop middle-class standards of behavior overnight is absurd. In addition, numerous fathers have deserted—in one New York project as high as 61%. *Needed:* a "home-makers service"—made up largely of middle-aged women who "do not hesitate to clean the house, bathe the children or cook a meal if necessary to inspire a careless mother to do a better job." *Second solution:* send incurable alcoholics, drug addicts and flagrant sex offenders "to appropriate institutions" instead of "throwing them on the streets to continue poisoning our society."

Illegitimacy "is being violently argued in relation to public housing." *Solution:* "after one offense, the mother should be given proper guidance to prevent recurrence. If that fails, warning should be given that a third offense means eviction." For "continued, irresponsible illegitimacy, we should hale the mother before a court empowered to sterilize her. Too often these women are mentally deficient. To allow our morons, whether married or not, to spawn like fishes puts too great a burden on our society. It becomes our duty to intervene and defend the future of civilization." *Solution No. 2:* "These poor ignorant mothers and fathers don't want huge families of ten or more children. I know because I've talked to hundreds of 'em. Since information on birth control is given in public health clinics in five or six Southern states, I see no reason why these clinics in our housing projects should not be empowered to give the same information. If sensible family planning were taught in our projects, it would be one of the greatest blessings to most tenants."

Inadequate welfare workers: "Specialization in our social services has put the emphasis of social workers on their own professionalism instead of the needs of their clients. Too much of welfare costs go to those who do the work, too little to those who need it." *Solution:* revolutionize "our schools of social work."

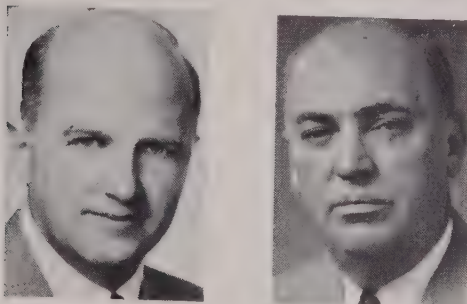
Teen-age gangs "in some big projects are terrorizing other tenants, breaking the lights and using the dark staircases for antisocial behavior." One reason: "There are not enough constructive outlets, whether work or play, for their vitality. Our educational system, our child labor laws and labor union restrictions make the years of adolescence a no-man's land for all but the gifted who go to high school and college." *Solution:* more organized recreation in projects; unions must revive apprenticeship on a much bigger scale instead of fighting it "to control the labor market, wages, seniority."

New president for J-M: C.B. Burnett

C. B. (for Clinton Brown) Burnett, 51, a production boss at Johns-Manville Corp since he was 33-years-old, will be J-M's new president and chief operating officer.

He will move up Jan 1 from executive vice president (a post to be abolished) and succeed **Adrain R. Fisher**. Fisher remains board chairman and chief executive officer; but he is scheduled to retire next spring when he becomes 65.

Bald but still youthfully handsome, Clint Burnett has handled some of J-M's toughest production problems since he joined the company in 1931. In 1941 he was put in charge



BURNETT



HAMMOND

of J-M's new ordnance plant near Parsons, Kan, supervised 10,000 employees over a vast 25 sq mi layout.

He moved up the executive ladder after World War 2, was elected executive vice president in 1957. He was chairman of the joint operating committee which integrated L-O-F Glass Fibers with J-M this year—a step which brought six fiber glass plants, a plastic building panel plant and a technical center into the J-M production line. Now he is working on a similar chore in connection with J-M's latest purchase: F. E. Schundler & Co of Joliet, Ill, producers of perlite.

Expansion by purchase and merger is only part of the J-M picture. As Burnett points out: "We are continually expanding in one way or another. We can and must increase productivity of old plants as well as build new ones." And this is Burnett's job. His point: If J-M is to retain its leadership in its field, it will have to grow still bigger to meet the housing boom of the '60's. "If any industry doesn't keep up it will lose out. There is a tendency on the part of users to buy new products in a time of shortage of the products they want."

Burnett notes that J-M is not tied to its present line of products in the building field: insulation, roofing, flooring and ceiling tile. "Our research department is working on new types of products right now. Some involve new basic materials we do not now use."

As J-M's operating boss, Burnett travels about half the time, visiting J-M plants from coast to coast. When he is working in J-M's New York City headquarters, he still travels: his Connecticut home is 75 mi from Manhattan.

The Burnett home is what Burnett, himself calls a maverick—"a winterized summer home"—on Candlewood Isle, Conn. But it is a monument to his faith in the do-it-yourself market. With only occasional help from tradesmen, he has added a bedroom and bath to the house, torn down a porch and rebuilt it, taken down the siding and put in insulation.

"I think there are millions of people who

undertake jobs like this themselves," says Burnett. "And they pay-as-you-go, so tight money, which may slow down new home construction, doesn't hurt them."

Burnett, a native of Waukegan, Ill, is also a golfer (70's) and he likes to fish—on those few days in the past four years when he has squeezed in a brief vacation. His favorite reading: mystery stories by Erle Stanley Gardner.

In another major shift at J-M, **R. S. Hammond** has been named vice president and general manager of the building products division, Hammond, 63, a 33-year veteran with the company, succeeds **W. R. Wilkinson** who is retiring.

Hammond started with J-M as a roofing salesman after a seven-year stint in China with Standard Oil. Since 1947 he has been sales manager of industrial building products.

MANUFACTURERS: **Stephen J. Hall**, 43, former administrative vice president of Simpson Timber Co, who left the firm after he was shifted to vice-president for foreign operations last summer, has bought his own firm: Stetson-Ross Machine Co of Seattle, manufacturers of planing mill machinery. **Arnold Kohler**, 42, a 24-year veteran with Briggs Manufacturing Co, Michigan plumbing supply producer, has been elected president and general manager of the firm. He succeeds **A. D. Blackwood**, who retired at 65.

Paul B. Shoemaker, 60, former ('56) head of Operation Home Improvement and sales vice-president of Masonite Corp since 1951, has been boosted to vice president in charge of marketing. His sales slot is taken over by **F. O. Marion**, the company's general sales manager since 1952.

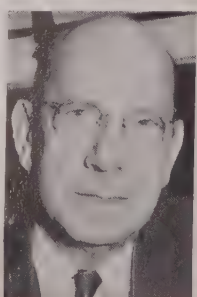
DuVall, Knapp elected to head US Savings & Loan League

The new president of the US Savings & Loan League, **Wallace O. (for Odell) DuVall**, 58, is a onetime school teacher and lawyer whose hobby is work.

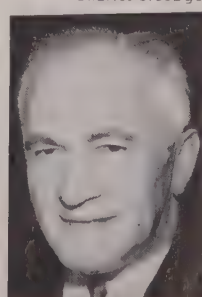
On Saturdays, say his associates, DuVall uses his "spare" time to inspect building projects—not only ones his S&L is financing but his competitors' as well.

DuVall succeeds **C. R. (Bob) Mitchell**, president of First Federal S&L of Kansas City, Mo. His successor as vice president (and thus in line for the presidency in 1961) is **C. (for Charles) Elwood Knapp**, 56, president of Friendship Federal of Pittsburgh.

Georgia-born DuVall, now president of Atlanta Federal S&L, graduated from the University of Florida, was first a university instructor and then a high school principal



DuVALL



KNAPP

in Florida. He served one term in the Florida legislature (1925-26).

Later he took his young family to Atlanta, taught school during the day and attended Atlanta Law School at night. As an attorney he made title searches and loan closings for the infant Atlanta Building & Loan Assn. In 1940 he was named executive vice president, in 1950 president. When DuVall joined it in 1930, Atlanta Federal had assets of \$121,000; today it has \$140 million, making it one of the largest in the South. Not only is its growth rapid, but its fiscal strength is among the tops (20% liquidity, 10% reserves), items to make other S&L managers marvel.

Knapp, a Pittsburgh native, has been in the S&L business since, as a high school boy, he began working for one established by his father. When three small S&Ls merged in 1939 to form Friendship, Knapp became executive vice president. He has been president since 1950. The S&L has \$40 million in assets, is fourth largest in the city.

Knapp helped organize the East Liberty Citizens Renewal Council, a merchant-civic group working with public agencies to redevelop East Liberty's business district.

A \$46 million renewal program is due to begin there next year. Knapp's S&L has just moved into a new building in the area—fronting on one of two streets which will become pedestrian malls. He is already planning an information and service bureau in the building to help property owners with rehabilitation problems and financing. (For a report on the US League's 1959 convention, see p. 56.)

Hutcheson, carpenters' boss, hit by new contempt charge

Troubles are multiplying for carpenters' union Boss **Maurice A. Hutcheson**. Indicted in 1957 on charges of bribing a state official in Indianapolis, Ind., Hutcheson is now under federal indictment for contempt of Congress.

And the Senate labor rackets committee has issued a report asserting that funds of the United Brotherhood of Carpenters have been "seriously misused" under his administration. Hutcheson's federal indictment stems from his appearance before the Senate committee June 27, 1958, when he repeatedly refused to answer questions.

Even without his help, the committee, headed by Sen. **John McClellan** (D, Ark.), reached some salty opinions about him. Among them: he used one **Maxwell C. Raddock**, described as a "shrewd confidence man," in the role of "fixer" to head off a first attempt to indict him on the bribery charge in Lake County, Ind. A grand jury failed to indict Hutcheson for an alleged attempt to get state highway plans in advance. Another grand jury in Indianapolis then took up the case and did indict, charging he made \$78,000 on a \$20,000 investment in land sold for highway use. The Senate committee charged that Raddock got \$519,000 of carpenter union funds, including \$310,000 for producing a biography of Hutcheson's father, his predecessor as union president.

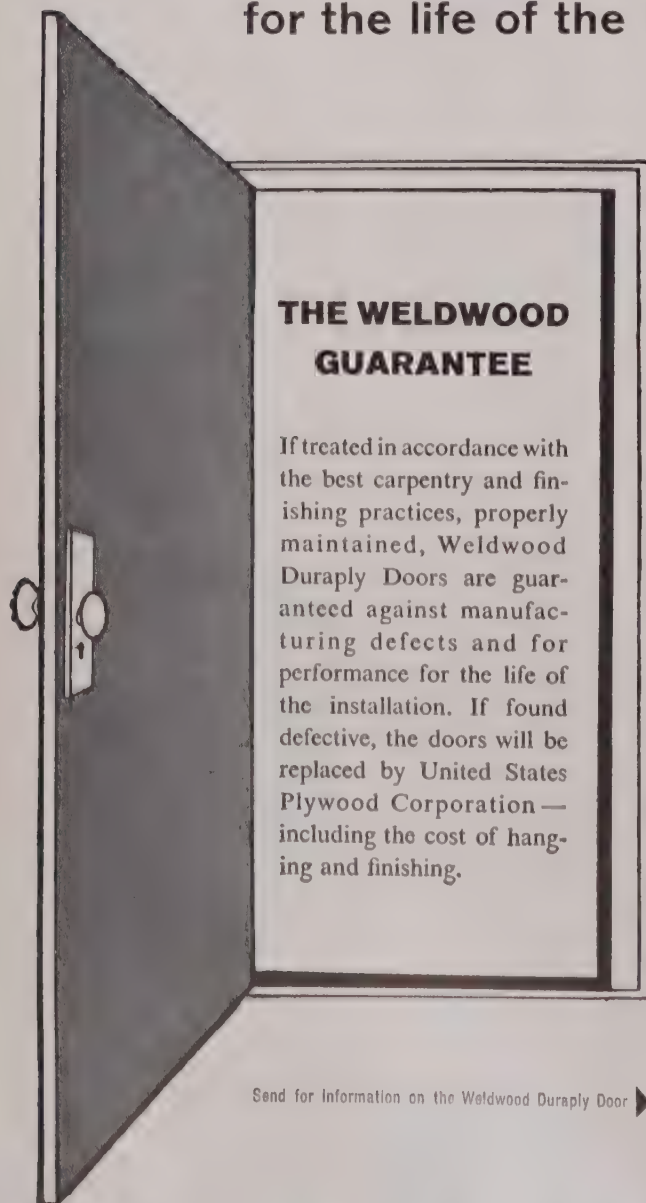
The committee also recommended ouster

continued on p 83

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EXCELLENT PAINTABILITY. Just one prime coat and two finish coats of good quality paint will last beautifully *up to five years*. The tough CreZon overlay withstands wear and weathering. No peeling, blistering, checking.

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*Reg. T. M. for CreZon—phenolic resin-cellulose fiber overlay.

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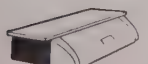
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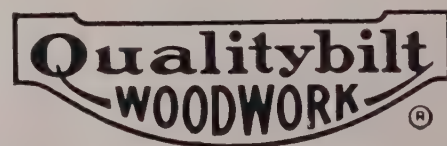
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of **Charles Johnson Jr.**, head of the union's New York district council and member of the executive board. It said he "unscrupulously and greedily misused his power and position . . . to further augment his income of \$224,600 between 1955 and 1957 "In view of the evidence before the committee it is apparent that Johnson should be stripped of any positions of responsibility within the union." The committee asserted that Johnson got \$96,500 commissions for petroleum products sold by one company to construction firms holding carpenter union labor contracts, got \$30,000 from the Yonkers (NY) Raceway for "settling labor disputes."

Big Builder **Bill Levitt** has sold 2,300 houses in the first year at his big Levittown, N. J. site. Sales are running about 200 a month.

Levitt estimates the development so far at \$50 million worth of constructing counting community facilities and houses both completed and abuilding. At completion, it will have some 16,000 dwellings.

Architects **Leonard Haeger** and **George Nelson** have teamed up to provide a new kind of economic-technical-design consulting service to the housing industry.

Haeger, who has been free-lancing as a consultant since he left Builder **Bill Levitt** last year, is a former assistant director of HHFA's research division and chief of NAHB's construction and research department. He was vice president and technical director for Levitt & Sons for 3½ years. Nelson, a noted designer of furniture, appliances and house elements was the inventor (with **Henry Wright**) in 1948 of the "storage wall" concept in house design, is a former managing editor of ARCHITECTURAL FORUM. He was design coordinator for the US exhibit in Moscow last summer, for which he developed a revolutionary "plastic parasol" construction for some pavilions.

San Francisco has become the first major West Coast city where the business power-center is stacking a big bet on making urban renewal work. First step: appointment of **John E. Hirten Jr.**, 34, livewire head of Stockton's redevelopment agency, as executive director of a revitalized (and renamed) San Francisco Planning and Urban Renewal Assn. Another: announcement that the city's influential Blyth-Zellerbach committee will underwrite the citizens group—formerly the no-budget, no-staff, no-action, dogood San Francisco Planning & Housing Assn—with \$30,000 a year for three years. The association will shoot for \$20,000 more to round out its budget.

Jerd F. Sullivan Jr., executive committee member of the city's Crocker-Anglo National Bank and now board chairman of the association, said Hirten's appointment signals "the organization of a professional staff and the development of an effective program to get everyone in San Francisco to understand and support urban renewal."

Hirten comes from two years as the first redevelopment head in Stockton, where his skill in enlisting community support let him organize the agency, bring one 190-acre residential clearance project to the loan & grant stage, start another 200-acre downtown renewal project.

The new activity echoes signs of life in San Francisco's Redevelopment Agency, now

headed by former regional HHFA boss **Justin Herman**.

DIED: **Henning W. Prentis Jr.**, 75, chairman of Armstrong Cork, Oct 29 of a cerebral thrombosis in Lancaster, Pa. Prentis was the key figure in Armstrong's years of rapid growth. He joined the company in 1907, rose by step to the presidency in 1934. In the next 16 years Armstrong's assets grew from \$47 million to \$112 million. Sales rocketed from \$22 million to \$163 million as Prentis took the company into a wide variety of businesses while building it into the world's

CODES:

Factional fight breaks out in ICBO

Rumblings of discontent shook the 37th annual convention of the International Conference of Building Officials in San Antonio.

ICBO, originally a West Coast group which started expanding only five years ago, split along two lines:

1. Officials from inland cities demanded more representation in ICBO's inner councils. They contested one place on the board of directors and won. Their nominee, Building Inspector **George D. Vann** of San Antonio, defeated Building Superintendent **William G. Vasvary** of Fullerton, Calif 41-36. (Vasvary was later elected treasurer by the executive committee.)

2. The rift deepened between officials supporting and opposing ICBO's crusty managing director, **Hal Colling**. Most of his opposition comes from California members—in the group the longest.

ICBO now has 761 members (up from 697 a year ago). Number of cities which have adopted its uniform building code is

largest maker of hard floor coverings. He stepped up to board chairman in 1950.

OTHER DEATHS: **George H. Schmidt**, 52, president of the Title Guarantee Co of Baltimore, Oct 8 in Baltimore; **R. H. Morris**, 67, general manager of Ponderosa Pine Woodwork and former (1929-52) business manager and publisher of *American Builder*, Oct 14, at his home in Highland Park, Ill; **John W. Hooper**, 63, president of the Lincoln Savings Bank of Brooklyn, Oct 22, in Brooklyn; **Warren H. Toole**, 60, Tampa realtor, in a plane crash in North Carolina Oct 30.

up from 1,200 a year ago to 1,250. Its income is up from \$187,297 in 1957-58 to \$210,247 in 1958-59. ICBO has also published a housing code. Still in its infancy, it has been adopted in 30 California cities and counties.

ICBO's new president is **Cassatt D. Griffin**, 56, superintendent of building for Los Angeles County. A Harvard-educated architect and member of AIA, Griffin has been with the LA building department since 1933. He has directed the building department since 1952, now has a staff of 225. His department controls building in the unincorporated areas and, on contract, in 25 of the county's 62 cities.



GRIFFIN

CANADA:

Free NHA interest rate, builders ask

The government's direct money pump for housing has run dry—two months earlier than expected.

With private money for 6% NHA loans also scarce, builders are wailing that homebuilding is headed for a 10 to 15% drop in 1960. And Canadian economists agree. One forecast predicts 125,000 starts next year vs the expected 140,000 of 1959—second biggest year in history.

The government started direct lending for builder mortgages Sept 1. A \$250 million fund, enough for 12,500 houses, was expected to last until Jan 1. It was gone by Oct 31.

The stampede to get commitments was a by-product of the money squeeze which has all but pushed private investors out of the NHA market. The NHA rate has been fixed at 6% since January, 1957. This is 1 to 1½% below the rate on conventional loans.

Builders contend 125,000 starts is not enough. They protest that the fall off will produce unemployment in their industry next year. NHBA President **Maurice Joubert** insists builders want the NHA interest rate freed rather than more direct loan money. NHBA is preparing a brief for Public Works Minister **David Walker** and President **Stewart Bates** of CMHC urging a free rate.

Says Toronto Economist **J. V. Poapst** who

is drafting the brief: "We have to convince the politicians a free rate can go down as well as up."

Except for probable appropriation by Parliament of another direct loan fund in January or February, builders are not likely to make much headway with the government. CHMC's **Bates** has shrugged off builders' complaints with the comment: "The outcry is unjustified. We can be fairly happy so long as housing starts don't fall below 125,000. That is the reasonable minimum . . . to take care of the growth in population, new families. Anything above that is a bonus, meaning that old houses are being replaced by new and better ones."

Exhaustion of the CHMC direct loan fund did have one helpful effect for builders. Scare headlines in papers throughout the country brought out a flood of prospective homebuyers. Said one Toronto realtor: "It seems to have given buyers a jolt. Builders who were ready to cut prices to make sales are now finding no difficulty."

Canada's housing starts by years:

YEAR	STARTS	YEAR	STARTS
1951	68,579	1956	127,311
1952	83,246	1957	122,340
1953	102,409	1958	164,632
1954	113,527	1959	140,000*
1955	138,276		* Estimated

GRAND PRIZE 1959



Detached House Micro-neighborhood



Staggered Row House Micro-neighborhood



Atrium House Micro-neighborhood



Annual Design Competition

CONCEPT

A major need in tract housing today is to express the small town community of the past in a new form. First, to better relate the individual home to its neighborhood community environment:

- We create a community of micro-neighborhoods sharing certain desirable facilities in common. Each of 56 micro-neighborhoods is located on a cul-de-sac with an average of ten homes. No home faces a circulation street. This makes possible the pedestrian environment essential to good family living where children's safety is primary. Common neighborhood areas are reached by crossing at most one circulation street.
- A variety of things to do are provided within the neighborhood. Pedestrian walks lead through "Small Stream Park" to small playgrounds, sports facilities, the community "country club," "general store" concession, bus stop, a late hour convenience grocer, and toward schools, churches, and shops.
- For the automobile, a circulation loop links micro-neighborhoods, community facilities, and access highways.
- The two small store concessions are conceived to help focus the neighborhood internally, and help support the community facilities.

To encourage more individual expression in ways of living we offer four housing types to appeal to varied age groups:

- One story individual homes grouped in micro-neighborhoods of different sizes and character comprise seventy percent of the development.
- Three types of row houses also grouped in micro-neighborhoods, are designed to afford economy of construction and land use. (See ledger.)
- Each type of housing is characterized by a private area for outdoor living. In the row house a front courtyard provides a transition from the street to house, and is also used to handle the automobile.

To create a visually appealing environment:

- We propose a comprehensive plan for community appearance. The municipal planning board is assumed to have special zoning powers to adopt this plan which will make the location and arrangement of building binding. These special powers under state enabling legislation are in existence in such cities as New York. They provide that where there is an adequate plan, ordinary zoning rules may be waived.
- To foster pride in the development, and to sustain it as a unity, we propose that deeds include ownership shares in a neighborhood corporation. This corporation shall own all common land, community buildings, and other community improvements, and maintain all private as well as community trees and lawns. An annual assessment of \$30.00 per family will cover building maintenance and labor costs for five employees, each at a salary of \$3000.00 per year.
- A sequence of spaces and vistas unifies the entire development. Both public and private spaces are organized by building masses, heights, and building lines, and by walls and tree patterns to encompass all things seen from the public way. "Vista easements" are provided for public enjoyment.
- A unity of form is achieved throughout the development with simple gable roofs of varying pitches.
- Within each micro-neighborhood a substantial portion of all structures shall be of the same material. Individual character in the micro-neighborhood is obtained with its building material, mass arrangement and special plants or sculpture as the focal point of each cul-de-sac.
- A special sidewalk pattern, street lamps, or other "street furniture" will contribute to the distinctive character of the development.
- The neighborhood is defined from the exterior with a landscaped fence zigzagged at a scale to be comprehended by speeding motorists, and by vistas from highways to the center of the development.

The image of the ideal small town environment can be given new form within the city by the conscious definition, isolation of neighborhoods such as this one. If the individual is to flourish, he must again be able to perceive and relate himself to a finite environment of human scale and beauty.



Howard R. Meyer,
F.A.I.A.



James Reece Pratt,
A.I.A.



John Harold Box,
A.I.A.

"The jury awarded the Grand Prize to an entry showing an unusual degree of sensitiveness, coupled with practicality. By unanimous consent, they found it to be a most convincing and beautiful solution at all levels, from the general concept to the varied and well-conceived details. It shows a respect for economy without forgetting the essential demands for aesthetic expression. In the opinion of the jury no other entry had the same degree of self-assurance or clarity of direction."



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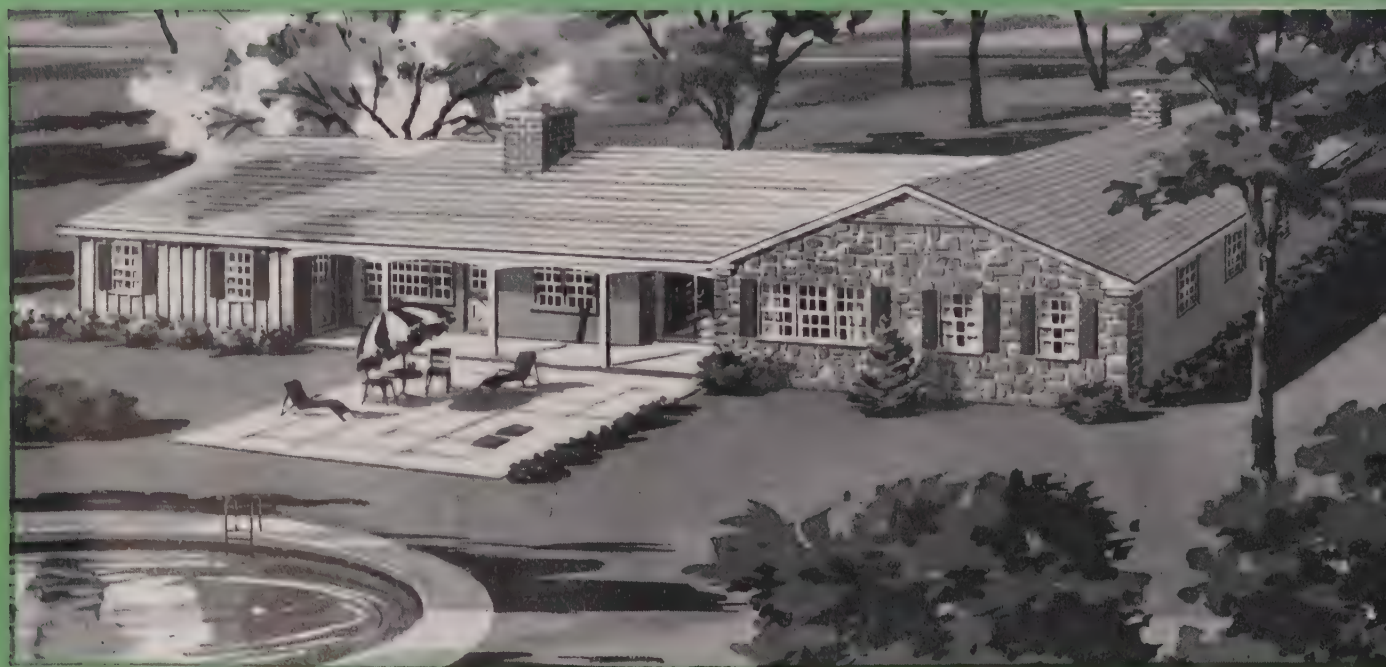
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all Presidential Colonials add a Touch of Quality with Forged Iron Hardware by McKinney

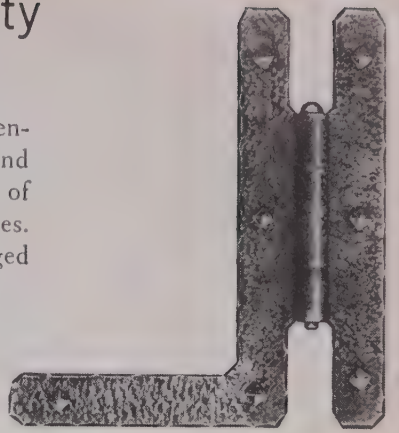
Presidential Homes, Inc., pays particular attention to the "little things" that go into their homes. Down to the finest detail, Presidential is offering the quality extras today's home-buyer wants.

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J-M Weathertite Sheathing is a large, tough sheet material which adds great bracing strength to the building frame. In addition, this efficient insulating board product helps retard the passage of heat and cold through the walls.

Apartments

I have read very carefully every word of your issue [Oct] on apartments and it is terrific. In fact, I think you should reprint it as a book, perhaps including some of the research and pictures you could not make room to publish in the magazine.

ALAN E. BROCKBANK, *past president, NAHB*

Last evening I spent about three hours reading the new [Oct] issue of H&H. This is one of the outstanding issues of what is certainly an outstanding magazine. All of the key men in our organization get H&H every month because I feel they can benefit so much by the up-to-date informative issue that you produce. We have been making many loans on apartment buildings and I agree with the importance of developing better more livable units. We are attempting to improve the quality, style, and livability by making suggestions to those who come to us for assistance. For some time we have required that any new buildings be air conditioned (even in Minneapolis) and that adequate on-site parking be available and attractive.

WALTER NELSON, *past president, MBA president, Eberhart Co.*

Trade-ins

I am in complete agreement that trade-ins will become increasingly vital in homebuilding [H&H, Sept]. Unfortunately, many other discussions on the subject by self-appointed "experts" had begun to discourage me. From our own experience, it was evident that other writers had overlooked the fundamentals and advocated approaches which were impracticable. Your article presenting Professor Hess' findings is the most concise, yet complete, presentation of an intricate subject that I have ever read in any trade journal. It is obvious that an outstanding job of editing was done on the 460-page thesis.

DAVID KISLAK, *vice president, J. I. Kislak, Inc. Jersey City*

... I have been kept busy responding to letters of inquiry from readers of the HOUSE & HOME article who want to know where they can get my booklet.

JOHN M. HESS, *professor School of Business, University of Colorado*

Minneapolis-Honeywell will supply HOUSE & HOME readers with Professor Hess's booklet for \$1.00 a copy.—ED.

Mixed up houses

Using both deductive and inductive reasoning (and guessing), I think I have figured correctly that HOUSE & HOME mixed up its descriptions of the Sarkowsky and Slavik houses in October. These two ran next to each other on your pages about Leaders' new designs, and each caption contains nine lines—which probably accounts for the mix-up. Am I a good detective, as well as a thorough reader?

LEON WEINER
*Franklin Builder Homes
Wilmington, Del.*

Reader Weiner must also have used intuition. He is exactly right.—ED.

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Ardmore, Pennsylvania. . . . Reports from all areas of the country indicate the rousing success of Certain-teed Products Corporation's new color-styling service to builders.

The service, introduced nationally the first of the year, offers to builders using Certain-teed products the opportunity to have the exterior of their new homes completely color-styled at no charge by Beatrice West, famous color consultant.

Sales Kit Introduced

To give further impetus to this service, Certain-teed also is distributing free to builders a complete merchandising kit which contains field-tested ideas for increasing sales.

The kit contains suggested newspaper ad layouts, television and radio scripts, and detailed plans for a public relations and publicity program to launch the opening of a new development.

All Certain-teed representatives have complete information on both the color-styling service and the new promotion kit.



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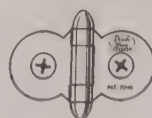
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READY HUNG DOOR INTERIOR & EXTERIOR UNITS
(Interior shown) Fit any construction — any wall thickness. Lock nailed header joint. Machine-made trim mitres. Self-aligning "Magic Circle" Hinges—matching lock & strike plate.

Quality, Economy, Beauty, Efficiency... all in a single precision-engineered package. That's what you get when you use Ready Hung Doors. Completely assembled door—with frame trimmed on both sides and hardware installed, arrives in perfect condition. Easily installed in less than 20 minutes. Adjustable jams for any wall thickness. Styles for every need... priced to save you money.



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*PAT. NO. 2893048



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*PAT. PEND.



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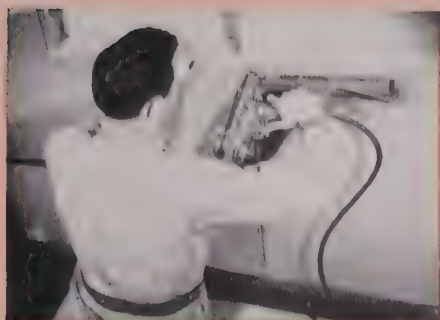


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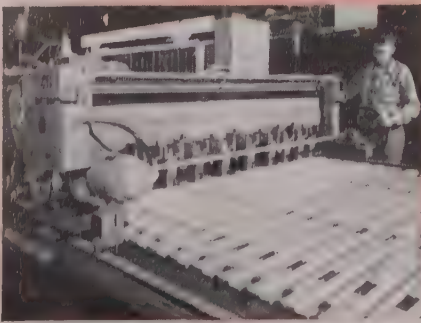
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All award winners will be published in **HOUSE & HOME**.
A selection of winning entries will be published in **LIFE**.
All winning entries will be displayed at the AIA convention and at the Octagon in Washington, D.C.

Any house in the US, custom-built or built for sale, is eligible if designed by a registered architect and completed since Jan 1957.

JUDGES—Outstanding architects, housing industry leaders, and the editors of **LIFE** and **HOUSE & HOME** will judge the entries.

AWARDS—Awards will be made on the basis of outstanding contributions to better living through residential design and construction. Award winners will be announced at the 92nd Annual Convention of the AIA in San Francisco, April 18-22, 1960.

Awards will be made in two major categories.

1. Houses designed specifically for an individual owner, divided into three classes according to size:

- a. Under 1,600 sq ft of living space.
- b. Between 1,600 sq ft and 2,800 sq ft of living space.
- c. Over 2,800 sq ft of living space.

2. Houses designed for a merchant builder and sold speculatively, divided into three classes according to sales price:

- a. Under \$15,000
- b. \$15,000 to \$25,000
- c. Over \$25,000

All entry slips must be received on or before Jan. 15, 1960 together with an entry fee of \$10 per house.

Entry slip This slip and entry fee must be in the hands of the committee by Jan. 15, 1960.

category _____ class _____ location _____

owner _____ architect _____

submitted by _____ builder _____

address _____

The Homes for Better Living Awards Committee,
American Institute of Architects, 1735 New York Ave., NW,
Washington 6, D.C.

Enclosed is ☐ (check) ☐ (money order) in the amount of

\$..... covering the above entry.

The greatest housing value ever offered
is exclusively yours in...

V I K I N G

**Maintenance-free
Aluminum**

**Sensational aluminum homes
for 1960 feature factory-baked
Lucite® finish... the most revo-
lutionary home paint discovery
in 100 years!**



V I K I N G

**Maintenance-free
Aluminum**

... America's most wanted homes
from coast to coast

Here is an exclusive home value which will outsell competition in any market.
It's the new *Viking* maintenance-free aluminum home... the most exciting,
most revolutionary home development ever.

In every market in which they are introduced, new *Viking* aluminum homes
score a sensational sales success. Dealers find they make more sales and make
them faster with the dynamic appeal of these new homes with DuPont's
Lucite® acrylic no-sheen enamel that's factory-baked for longer life! In a
record-breaking 9-day promotion in five different cities, 96% of the homes
sold were of *Viking* maintenance-free aluminum—713 out of 746. And in
two of the cities every buyer chose *Viking* aluminum.

You, too, can have more sales, turn your houses faster and earn more profit
when you offer *Viking* aluminum homes. But this is only part of the benefit
you receive.

With a Viking aluminum home...

—once it's up, you "walk away." There's no outside site painting because the
entire exterior... from sidewalls to soffits, gable ends to gutters... is factory-
finished in new baked Lucite® enamel.



A blend of Continental Charm and Modern Planning . . . in Viking maintenance-free aluminum.



There is a French Regency home in a size and price range that will sell fast in your market.

New for 1960 . . .

Gracious

French Regency

Styling

New Regency styling demonstrates the outstanding fact that *Viking* maintenance-free aluminum enhances traditional architecture. This authentic expression of the French Regency period, styled by Emil A. Schmidlin, A. I. A., will have its picture-book-look for a lifetime. Its lovely exterior is formed by a skillful blending of attractive features . . . the recessed entry with beckoning coach lights, white-shuttered windows, imposing roof lines and the stepped chimney that is the authentic hallmark of French Regency design.

Outstanding home styles...

hundreds of beautiful designs...dozens of attractive floor plans
...all available in Viking maintenance-free aluminum

Patios designed for privacy always look crisp and clean with a background of maintenance-free aluminum.



Lovely interiors . . . planned with big, adaptable living areas and generous storage space, have maximum sales appeal.

The new "circulating" floor plan features a bathroom with entry from both kitchen and bedroom areas to reduce traffic through the rest of the house. Spacious bedrooms have floor-to-ceiling closets. Kitchens feature wall and base cabinets of natural wood-grain vinyl finished in enduring *National-mica* that is stain-proof, mar-proof. Truly, the new *Viking* maintenance-free aluminum home offers everything your buyers could want . . . inside and out . . . at prices they can afford.



COLONIAL . . . offering the exceptional charm and grace of period styling and the best of modern planning. The authentic detail of the exterior and the livability of the interior make these homes easy to sell in any market.



CAPE COD . . . featuring the traditional bay window, shutters against horizontal siding and shingle roof . . . features that have made this New England home a favorite across the country.



CONTEMPORARY . . . designed for today's living. Modern materials are used functionally in elegant contrasts of window walls with board and batten siding. These homes are a tradition in the making.



Large living rooms, many with window-walls, are typical of the charm and livability of Viking aluminum homes.

Family rooms are skillfully integrated with kitchen to be one large living center.



Kitchens planned for efficiency feature wall and base cabinets of mar-proof, stain-proof walnut vinyl with *National-mica* finish.



Sliding glass doors connect family room with patio, providing convenient access to outside living.

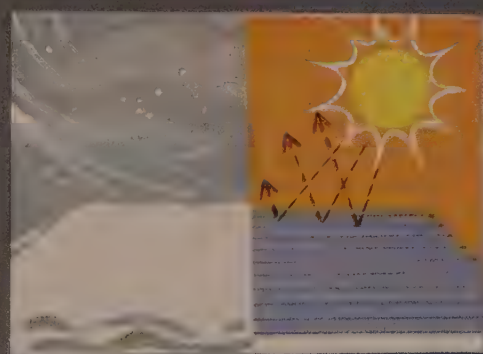
—you build in any weather. With an exterior that's entirely pre-finished. Because you can be under roof in just one day, you can build all winter long.

—you offer a complete variety of architectural styles, floor plans and price ranges. You build with the utmost flexibility and have all the sales advantages of maintenance-free aluminum.

Here are some of the exclusive sales features you have with Viking maintenance-free aluminum



You offer customers a home with an exterior that's easy to clean . . . The entire outside of a Viking home can be wiped off as easily as the outside of a refrigerator. The factory-baked Lucite® finish on maintenance-free aluminum siding has no sheen, holds its original color for years.



You offer customers a maintenance-free roof . . . reduced fuel bills. Aluminum roofing with permanent Lucite® finish reflects heat away from the summer, retains inside warmth in winter. Homes are one-third cooler in summer and much warmer in winter. Fuel bills are substantially reduced.



You offer customers a home with nothing outside to rust or corrode—Shutters and windows; gable ends, gutters and downspouts; soffits and fascia boards are all of bonderized aluminum with factory-baked Lucite®. Windows have white neoprene glazing to eliminate repainting.



You offer your customers interior finish of lasting beauty—Passage doors are protected by mahogany-grain vinyl with National-mica finish; kitchen cabinets by walnut-grain vinyl with same hard finish. These surfaces are scuff-proof, mar-proof—provide durable protection against every-day use.

No doubt about it. You have a lot more "sell" in Viking maintenance-free aluminum. You have something your competition doesn't have! You don't have to repeat competitors' talk . . . say the same old things about just another new house. When you sell Viking maintenance-free aluminum, you sell *exclusivity* . . . and you sell a more solid, warmer, cooler, more convenient, more maintenance-free home than heretofore possible at any price.

Viking aluminum lasts a lifetime . . . and these next pages will show you that Viking aluminum is style, variety, and flexibility!

There's a factory producing Viking maintenance-free homes within 200 miles of virtually every builder in America

Each of these National wholly-owned subsidiary factories produces the Viking maintenance-free aluminum home. So, wherever you build—there is a National subsidiary that can serve you best. As you see below, there is a National factory within 200 miles of almost every major market East of the Rockies plus a centrally-located factory in the West.



National Homes, Lafayette, Indiana; Horseheads, New York; Tyler, Texas.



Knox Corporation, Thomson, Georgia.



American Houses, Inc., Allentown, Pennsylvania; Lumberton, North Carolina.



Lester Brothers, Inc., Martinsville, Virginia.



W. G. Best Factory-Bilt Homes, Inc., Effingham, Illinois.



Thyer Manufacturing Corporation, Toledo, Ohio; Collins, Mississippi.



Fairhill, Inc., Memphis, Tennessee.



National Homes Corporation of California (Formerly Western Pacific Homes) Decoto, California.

YOUR FUTURE WITH NATIONAL . . . UNLIMITED! This year more than 45,000 families will have moved into homes produced by National and its subsidiaries . . . from California to Maine.

In 1960 this success story can be your success story. The proved *National Way* of building offers you unlimited growth. Here are five reasons I know this is true:

- National and its subsidiaries offer you the most saleable homes in existence . . . from nearby factories . . . in a complete variety of architecture and floor plans all in Viking maintenance-free aluminum.
- National offers qualified builders financial assistance in land acquisition and site development.
- National Homes Acceptance Corporation offers you construction loans and mortgage financing.
- National provides you with advertising and merchandising assistance to ensure the success of your open house promotions.
- National's 12 subsidiary factories from coast to coast are located to give you the fastest and most expert service by men who know your local conditions and building problems.

We are eager to serve you . . . to be your home supplier . . . to help you make more profit this year, next year and throughout the years of opportunity that lie ahead. Contact the plant in your area or write me direct.

James R Price
Chairman of the Board
National Homes, Inc.
Lafayette, Indiana

DECEMBER 1959

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**THE
MANUFACTURED
HOUSE
IN 1960**

Here is HOUSE & HOME's

7th Annual Report on Prefabrication:

1960 *should be a pivotal year for home manufacturing—almost the last year that the prefab-in-a-package will need much on-site labor. This prediction is not based on the record of the 1950s. It is not based on a startling new technology. The reason for predicting an early breakthrough is that makers of manufactured houses now command money and resources on a par with other great industrial corporations, and this money and these resources are at last adequate to solve the problems that still stand in the way of an "industrialized" house.*

In 1959 the big news about prefabrication was National Homes' acquisition of seven companies (H&H, Sept). This consolidation makes National about the 350th biggest US corporation and gives it 12 plants blanketing markets in 33 states. Equally important, this consolidation is almost sure to accelerate mergers and plant expansion by other house manufacturers.

There are plenty of prefabricators with the potential to grow big in a hurry:

There is US Steel Homes, backed by one of the country's largest corporations; Inland Homes, a company with capital, three big plants, and a profitable share of the Midwest's low-cost market; Harnischfeger Homes, a name with a fine reputation and a great industrial corporation behind it; Scholz Homes, nationwide distribution and strong on product design; Kingsberry Homes, fast expanding in the Southeast and financed by Eastern money; Crawford Homes, a strongly managed company with an established market in a growing part of the South. And there are others.

It would be speculative to say which of these growth companies will actually become giant house manufacturers, but it is almost a sure thing that some of them will.

For an interpretation of what this means to everyone with a stake in the housing industry, turn the page.

In 1959, home manufacturers had their second best year and prepared for even better results in 1960

Manufactured-house starts jumped about 20% this year—the biggest percentage gain in years. The total: more than 80,000 starts (vs 67,000 last year); the biggest volume since prefabrication's top year in 1955.

The industry's giant, National Homes, accounted for 45,000 of these starts; or 56% of prefabrication's total and 4.3% of all single-family, non-farm starts. (For details on National's new set-up, see opposite).

Here is what the prefabbers did to boost their 1959 total

Perhaps the most significant development: home manufacturers broke out of the so-called Midwest triangle.

Big and smaller prefabbers alike made sales progress in all sections of the country except the Southwest, and many were building new plants and setting up new distribution corporations that clearly showed their plans to make a strong push in the South, Middle Atlantic and New England states, and the West (for more details, see opposite).

But there were plenty of other important developments in 1959:

Item: Several prefabbers broadened their price range. They found increasing demand for bigger and higher quality houses, partly because of the second-time-buyer market for manufactured houses (for details, see *p 110*).

Item: Many prefabbers broadened their line by moving into the apartment-house, shell-house, and vacation-house market. Two manufacturers actually added apartment-house units to their regular line this year, and many more are studying this growing market carefully (for details, see *p 115*). Inland and National broke the ice and jumped into the "finish-it-yourself" market last year, and this year three more leading manufacturers joined them (to see why, see *p 113*). At least five of the leading manufacturers (plus more than 25 smaller companies) added a vacation-house package to their line or expanded their vacation-house production this year. (To see why this second-house market is becoming especially active for home manufacturers, see *p 113*.)

Item: Almost all prefabbers added new models to their lines, and these models incorporated more new features, more flexibility in planning and styling, and more value per dollar than new models have shown in years (for a sampling from the home manufacturers' 1960 catalogs, see *p 210*).

Item: More and more prefabbers offered still more services to their builder-dealers. The "standard" services—sales and merchandising help, financing help, market research, land planning assistance, and the like—were taken for granted. Only last year, financing for land and land development was big news (*H&H*, Dec '58, *p 88*); in 1959 almost every leading home manufacturer was buying land for qualified builder-dealers. At least one prefabber was actually offering to manage its dealers' business for them, and one was offering to handle its dealers' subcontracting problems. This trend should be even more evident next year. (For details on the new services, see *p 111*.)

Technological progress made by the prefabbers can be seen in some 1960 house packages

Biggest news came from Homebuilding Corp, which introduced a complete, one-piece mechanical core (pictured and described on *p 112*). But many other companies developed new systems, new components, and new engineering details (*p 112* and *p 130*). These new developments—teamed with more efficient factory operations which in some cases cut in-plant labor to as low as 92 man-hours per house (*p 116*)—helped prefabbers generally to hold the line on prices in the face of a 7% to 8% hike in building costs (*p 111*).

Despite the year's advances, home manufacturers in 1959 were experiencing increased competition from shell-house makers, pre-cutters, mobile builders (like Centex) and giant local builders (like John Long of Phoenix) who do their own prefabbing (*p 115*). As the year shortened, the pinch of tight money became severe and sales were hard to make. In this climate it was soon apparent that the big home manufacturers were giving their builder-dealers a sharp competitive edge over many conventional builders (see opposite and *p 110*).



1899

model: how far has prefabrication come since then?

For an appraisal of home manufacturing's technological progress since the turn of the century when Hodgson Homes sold this house in Dover, Mass., see *p 134*.

Home manufacturers were helping builder-dealers by sharing with them the leverage of "big business"

In the sticky last quarter of 1959, the big advantage that home manufacturers* have because of their size, financial strength, and purchasing power became increasingly important to their builder-dealers.

Specifically, the prefabbers—most of them big businesses in comparison with all but a handful of conventional builders—passed along to their builder-dealers:

1. *The cost reduction they get by fabricating house components on an efficient production line.* (This factory saving should be increasingly important as housing starts climb toward the two-million mark in the next five to eight years, and the demand for field mechanics grows proportionally.)

2. *The advantage of large-scale purchasing and low delivery service costs.* (Home manufacturers can sometimes offer lower material costs; and their house-package system provides efficient and convenient delivery of materials to the site.)

3. *The advantage of better-than-average design.* (All but one of the leading prefabbers have retained architects to design their models; and since the cost of architectural service is spread over so many houses, it is virtually free to the builder-dealer.)

4. *Their long list of services* (financing, land-buying, consultation in sales and merchandising and the like).

These passed-along advantages of bigness had a strong appeal to big builders and medium-sized builders, as well as some smaller-volume operators.

Prefabbers were best able to help their dealers under one (or more) of these three conditions:

Condition 1: *Wherever field-labor wage rates were high enough to mean a sizable difference in unit labor costs between on-site building and in-plant production.*

Condition 2: *Wherever the delivered cost of locally purchased materials and equipment was appreciably higher than the cost of the same materials and equipment purchased as part of a house package (this sometimes occurs when a builder is operating away from major distribution centers or is spreading his volume over scattered lots).*

Condition 3: *Whenever the builder's own management and capital resources were inadequate to handle his potential growth. In such cases, builders often found they could "go prefab" to get the money and managerial help they needed, but could normally obtain only by sharing their business with additional partners and investors. This "growth aid" may prove to be one of prefabrication's most potent appeals as house manufacturers grow bigger and have greater resources with which to assist their dealers.*

This year the home manufacturers aimed at a new goal: nationwide distribution

"We have a good market in the Southeast. Now we want to tackle the Midwest, the mid-Atlantic area, and the West Coast."

So says Al Hildebrande, president of Kingsberry Homes, Ft Payne, Ala. Other large prefabbers—no matter what the location of their present markets—were talking along the same lines as they made plans for 1960.

By the end of this year, it was clear that prefabrication was no longer confined to the so-called Midwest Triangle. Other upcoming areas: the Middle Atlantic and Northeast (in Washington alone, 13 home manufacturers are competing); the West Coast (where Western Pacific, now merged with National Homes, had the best October in its history); and the Southeast (where Kingsberry more than doubled its sales this year). The only holdouts: Florida (see below) and the Southwest, both strongholds of low-cost, concrete-block-stucco construction.

But so far only two companies—Scholz Homes and National Homes—have gone nationwide. Don Scholz did it by licensing woodworking plants to make his houses in seven cities—Wilmington, Del.; Durham, N.C.; Palm Beach, Fla.; Kansas City, Kan.; Greeley, Colo.; Houston, Tex., and Long Beach, Calif.

National went nationwide by merging with seven other companies—W.G. Best Homes, Ellingham, Ill.; American Houses, Allentown, Pa.; Thyer Mfg, Toledo, Ohio, and Jackson, Miss.; Knox Corp, Thomson, Ga.; Fairhill, Inc, Memphis; Lester Bros, Martinsville, Va.; and Western Pacific, Decoto, Calif.

Six of these mergers gave National a strong position in areas where, in 1958, it had only 1,000 of a 23,000 total prefab sale. And all seven of them gave the nation's largest prefabber a factory within 200 miles of every big metropolitan area in the eastern half of the US. National also gained: more money-borrowing power—particularly for raising capital for land buying and development (see p 111); lower

materials costs that result from bulk purchasing; and more experienced management, sales, and technical people. (National's stock, which jumped to 25¼ when rumors of the merger were confirmed, had dropped back to 16¾ by Nov 19.)

Some companies are expanding their markets by building new plants. For example: Inland Homes, which already has plants in Piqua, Ohio, and Hanover, Pa., will build new facilities in Clinton, Iowa. Harnischfeger Homes, Pt Washington, Wis., expects to add two or more plants in the next two years. And National itself is planning three more plants—one in Florida and two in California.

Experts believe Florida is the next big battleground for prefabrication

Already in business there are National, Florida Builders, Ivan R. Ford of McDonough, N.Y., Preferred Homes of Mobile, and Kingsberry (one Kingsberry dealer is building 1,000 houses in Ft Walden).

The big question: can frame construction (used by prefabbers) compete with lower-cost CBS construction (used by most of Florida's conventional builders)? National and Kingsberry say it can because buyers want the "better styling" of frame construction. National is framing houses for its Florida market with redwood to lick the termite problem.

In northern Florida, Ford has set up a cooperative manufacturing and distribution corporation, in which a few successful builders have been invited to invest up to 33⅓%. Their share of the profits will be based on the amount of their investment and their sales volume. Ford's aim: to increase the capital of Ford Homes Leases, Inc, an affiliate finance company, so that adequate interim financing can be extended to all its builder-dealers.

* For the names of home manufacturers in your area, write to: Home Manufacturers Assoc, 1117 Barr Bldg, Washington 6, D.C.

continued

Many prefabbers reported a growing demand for houses in the middle-price market

The quality and size of home manufacturers' products has been inching up this year. Here is significant evidence:

1. Kingsberry put 40% of its 1959 production into houses that sold for \$12,000 to \$20,000 without the land. Says Kingsberry's marketing vice president, Milton Gustafson: "Our house is gradually moving up into the higher-priced brackets."

2. National's new split level ("The Estate")—\$12,900 without land—should account for almost 10% of the company's 1960 shipments, according to Chairman Jim Price. This is far more volume than any of National's other middle-priced models have ever attained.

3. Pease Homes' second-best seller is the "Spacewood" (see p 126), a large house the sells for \$17,000 without land.

4. US Steel Homes, which has always done most of its business in the low-price market, will expand its line from 24 to 82 models in 1960 to cover the middle market.

Manufacturers say the reasons for greater emphasis on medium and higher-priced models include the following:

The manufactured house is winning greater public acceptance and that means a deeper penetration in all price brackets. And more second-time buyers than ever before are in the market today.

Says Bob Esler, Harnischfeger Homes' sales vice president: "People are coming back to us for the second time. These buyers are able to pay for a bigger house than they originally bought. And now we are finding that people are really interested in our product—not just our financing plan."

But many prefabbers were selling a larger proportion of low-price houses than conventional builders in their areas.

Reason: The mass-produced, manufactured house often has its biggest advantage over the conventionally-built house in the big-volume market.

So the bulk of manufactured-home sales is still in the lower-price brackets

At US Steel, 70% of this year's models sell for under \$9,000 without lot; 20% for \$9,000 to \$12,500 without lot.

At National Homes almost 90% of 1960 shipments will be low-price houses. The breakdown, priced without lot: \$8,500 to \$9,500—30%; \$9,500 to \$10,500—40%; \$10,500 to \$12,500—20%; over \$12,500—10%.

At Inland Homes, over 95% of production will go into the 1960 "Mustang" (see p 123), selling for \$8,600 without lot.

At General Homes, 95% of 1960 production will be in a house that sells for less than \$10,900 without lot.

But General has also added more value to its houses. This year, for the first time, it used Architect Dick Pollman to design exterior elevations. It has enlarged its kitchens, added an inside bath, more and bigger closets, and a separate, finished utility area.

At Pease, this year's best seller was the lowest-priced model ("The Scottwood"), a 1,000 sq ft house priced at \$11,800 without lot.

And Admiral Homes—after years in the higher-price market—decided this year to go into the low-price field. Result: houses selling for under \$10,500 without land accounted for 30% of Admiral's production (the other 70% was in the over-\$12,500 bracket).

For many prefab dealers tight money was a blessing in disguise

As money started to tighten up in late June, the prefab builder found himself in a better position than many of the conventional builders with whom he was competing.

Why? Because the money sources of a large corporation—the prefab manufacturer—were available to him. Mortgage-acceptance corporations of most large home manufacturers were better able to attract investors than most local mortgage bankers because 1) they were bigger; 2) they were diversified geographically; and 3) they could provide a larger volume of mortgages for immediate delivery.

National Homes Acceptance Corp, largest in the industry, was able to service loans within a 200-mile radius of its six branch offices while the typical mortgage banker could go no more than 50 miles.

NHAC says it may eventually have a nationwide network of offices in most major market areas. Says National's Frank Flynn: "This is the logical way to cut mortgage banking's high overhead, which in the past has put mortgages at a competitive disadvantage with other kinds of investment opportunities."

This year almost every prefab leader had some form of financing company

The only exceptions: Don Scholz and Pease Homes. Scholz dropped his acceptance corporation "because we ended up financing builders who lacked the reputation, ability, and credit to tap local lending sources." Pease says its builders need only occasional help to get money.

Most financing plans were more complete than ever. They

covered four areas: model-house financing, presold-house financing, speculative-house financing, and FHA operative-builder financing.

Model-house and speculative-house financing got special attention. Take Kingsberry's plans, for example:

On model houses, Kingsberry lends 75% of the model's appraised value (but no more than a required permanent mortgage take-out commitment). The term—six months—is long enough to cover a marketing season. Interest is 6%. The builder must have ten cases filed with FHA or VA, a sound business reputation, and a net worth of \$10,000.

On speculative houses, Kingsberry's requirements are a bit stiffer. A ½% service charge is added to the interest, and the builder's net worth must be \$100,000. He must also build no more than five houses beyond sales.

Most financing deals were tailored to the individual builder-dealer

"Each deal is a separate deal depending on the builder, his business, his liquid position, and his prospects," says General Homes President Bill Hall. "We can get so close to a good dealer that we supply him with the works and get our money back when the closing comes."

How were prefabbers working with builders on financing? Here's what Crawford Homes did for Builder "John Doe:"

1. It helped him prepare a subdivision map, then got the map approved by FHA and local authorities.

2. It prepared plot plans and obtained FHA mortgage commitments.

3. It got an investor's firm commitment to purchase mortgages on the completed houses.

4. It got an attorney to prepare notes and mortgages for each firm commitment.

5. It arranged with a title company to provide title insurance (the attorney supplied necessary loan documents).

Crawford's fees for services were collected as the buyer took title on each house.

Home manufacturers held the price line in the face of rising labor and materials costs

Although building costs (labor and materials) went up 7% to 8% in 1959, the prices of most manufactured-home packages were no higher than in 1958.

And a few major manufacturers reduced prices—sq ft for sq ft. Kingsberry Homes, for example, dropped its prices by 2%. Don Scholz, who held the line this year, says he will cut his prices by 8% next year. And Inland Homes' prices have not changed since 1955.

Here is a typical case from Kingsberry: The appraised value of its "Fayette" model is up \$500, its average price down \$52. The added appraisal comes from heavier slider windows, more inside storage, and 48 sq ft more living space.

Here is how prefabbers were beating higher costs:

1. They were achieving a higher degree of prefabrication,

moving more work into the factory. Scholz is a case in point. He has slashed shell assembly labor on his Brentfield model from 114 manhours in 1958 to 52 manhours in late '59.

2. They were improving the engineering of their packages. One example: Kingsberry, which last year pruned 212 pieces of superfluous lumber framing out of its basic house package (the house is still 40% stronger than FHA's MPS require).

3. They were improving their manufacturing methods. For instance: National Homes has put more mechanization in its plants, can thus offer aluminum-sided houses for the same price as brick veneer or beveled siding. National's aluminum-application methods (see p 116) have offset the fact that aluminum sheet costs more than other siding materials.

There were more services than ever in this year's prefab packages

This year home manufacturers continued to step up their services—long one of their big appeals to builders.

Says one large manufacturer: "We will now do merchandising, glamourizing, promotion, color selection, engineering, designing, and landscape planning. And we will arrange to get working capital, construction loans, and permanent financing for builders."

Prefabricators were also doing more than ever to solve one of the builder's most pressing problems: how to acquire land. Almost every leading home manufacturer is now willing to buy land for the builder-dealer, then sell it to him lot-by-lot as his houses are sold. Result: the builder no longer has to raise large chunks of capital to buy large parcels of land all at once.

In 1959, land-buying programs made it easier for manufacturers to boost the production volume of their builder-dealers and to attract new builder-dealers. Despite the tight-money market, many dealers could still get construction and mortgage money from local lenders. But few of them could raise money for land acquisition.

But not every builder-dealer could qualify for land-buying help. Many weren't large enough. There were no industry-wide rules, but most manufacturers required that a dealer have a net worth of \$100,000 before they would consider a land-acquisition deal with him. And if the dealer happened to be new to the business, even a large net worth was no guarantee that he would get land-buying assistance.

National Homes has set the land-acquisition pattern followed by most home manufacturers

Says National's Vice President Clifford Smith: "We buy land only at the request of qualified and financially strong builders. At the time we enter into contract for purchase of the land, we also enter into contract with the builder to sell it to him. Our only revenue from this contract is a fixed fee we charge for use of the money. Any profit that accrues from conversion of the land goes to the builder. We also lend builders money—but mostly for developing raw land.

Where does the money come from? National has already placed privately two debenture issues—\$7 million in the spring of '58 and \$22 million the following fall. Both raised money for buying land and making development loans to builders. Debentures can also be placed with the Small Business Administration.

A home manufacturer has to be fairly big to buy land because, as Inland's Eugene Kirtz says, "You have to be able to complete the project if the builder falls down on the job." Some manufacturers also came up with new ways to serve their builder-dealers.

One big company now practically manages the builder's business for him

Here is what Crawford Homes, a Baton Rouge firm, will do for a builder-dealer:

1. It will work out a formula, based on the builder's potential, to determine how many units he must erect and sell each month. Says a Crawford executive: "If the site is right and the market is good, there is no chance of failure."

2. It will analyze the builder's operations—including capital requirements, cash-flow charts, overhead costs, construction costs, net profit projections, periodic reports on inventory to be maintained and land to be developed, FHA and VA commitments, and forward commitments for permanent loans.

3. It will keep the builder's books—even tell him how much he can spend on his expense account and check his FHA submissions.

4. It will give him four books that tell him in detail how to capitalize on all of Crawford's services. Titles: *The Plan for Profit, The Plan to Sell, The Plan to Build, Planning and Control.*

Why doesn't Crawford simply take over the builder's operation? "Because our business is selling house packages. If we went directly into building, we would limit our growth and tie ourselves to specific localities. Also, we couldn't

continued

find enough good management people to handle all our dealerships. Under our present set-up, a builder has a personal stake in the business. So he works a lot harder than if he were just our employee."

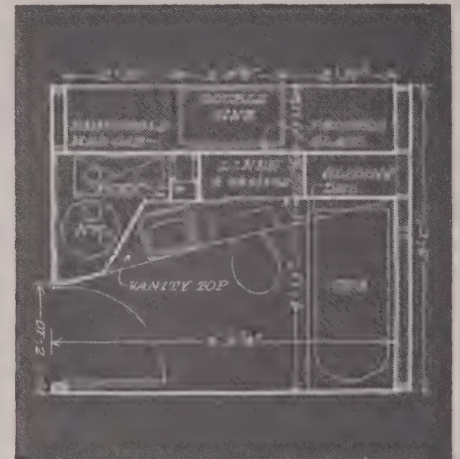
Two other prefabbers now shop subcontractors for their builders in large metropolitan areas

That way, the two—Don Scholz of Toledo and Americana Homes of McLean, Va.—beat one of the big problems faced

by every home manufacturer: how to keep builder-dealers from unwittingly running up their costs. Here's the way Scholz lines up a plumbing subcontractor to install bathrooms:

He figures finished bathroom costs with the subcontractor. He shows the sub how to work with the prefab package and how it will cut his costs. And he guarantees the sub a high volume of business from all Scholz builders in the area. Result: the contractor bases his estimate on low cost and high volume, and Scholz gets a lower bid than an individual builder-dealer could get.

Lehmer Studios



COMPLETE MECHANICAL CORE—assembled and prefinished in Homebuilding Corp's plant—is swung into position over house foundation. Core will be set on central girder, which doubles as heating and cooling duct: air will flow through opening atop girder to ducts in floor panels; beam extending out to right side of foundation wall is cool-air plenum from air conditioner, which will be outside house. With core in place, only field jobs are waste, water, and electrical hookups.

Home manufacturers made some progress in reducing field-labor hours

This year home manufacturers kept on whittling away at their two toughest technical problems: 1) how to reduce the cost of installing mechanical services in the house; 2) how to reduce the finishing costs of the house.

The aim in both cases: to simplify expensive on-site work by switching elements of it to the factory. Progress in both cases: helpful but far from conclusive.

One of the most exciting developments seen this year was a complete prefinished mechanical core (see photos above) that can be in full service ten minutes after it is delivered to the job. But the excitement was tempered somewhat by the fact that the core—perfected by Homebuilding Corp of Sedalia, Mo.—has not yet been widely used in builders' houses.

Other mechanical developments included:

1. A one-for-all furnace that can be used for different size houses. The unit—developed by the Home Manufacturers' Assoc and A.O. Smith Corp—has a modulating valve that varies the output in either boiler or furnace—from 60,000 Btu to 120,000 Btu per hr. Result: a prefabber could warehouse just one type of furnace for all his models. Adds A.O. Smith: If several prefabbers wanted the same unit, they could get it at 60% of the small-order price.

2. Improved plumbing trees that trim installation costs. General Homes, National, and Kingsberry all improved the plumbing trees in their basic packages. With National's sys-

tem, the installed cost of a finished bathroom is now \$450. Kingsberry now provides two baths for a finished cost of \$675 (including \$150 for the plumbing contract in the field).

Among this year's new finishing developments were:

1. Snap-on door and window trim that is saving finishing time for National Homes' builders. The metal trim is snapped into saw kerfs in the heads and jambs of door and window units after the interior walls have been painted.

2. A tough new preprimer that is expected to improve final paint jobs for Kingsberry Homes' builders. Kingsberry will start using the long-oil, alkyd primer in January. It will be applied to yellow pine in the plant and dried in one hour in a baking oven (drying the penetrating primer at room temperature would take several days). Kingsberry says the duPont primer should make an ordinary field-applied finish last twice as long as it would on a field-applied primer.

Next year may see the success of a house that nearly does away with field work

The house will be a new version of Don Scholz's factory-erected model (H&H, Dec 56, p 134). It will be made up of three sections—each finished in the plant and hauled to the site on wheels. Only field jobs: setting the sections on a

foundation, attaching them to each other, and connecting service lines.

In 1956, Scholz built 15 of his sectional houses. Next year he will start his floor decks on casters and build up the units to meet at a split ridge beam running parallel to the

roof ridge. Interior partitions will fall at the inner face of each unit and, with cross partitions, will bear up the inner roof edge at the split ridge beam. Scholz says the roof deck will be 2" or 3" Simpson fiberboard or a builtup stress-skin sandwich (both are about equal in finished cost).

More home manufacturers were moving into the growing vacation-house market

In 1959, home manufacturers were tapping new markets not only by expanding into different parts of the country (see p 109) but also by expanding into different kinds of housing.

They were showing more interest in apartment houses (see p 115). And they were hiking their production of shell houses (see below). But their most important new market was the market for vacation—or second—houses.

"Home manufacturers in general will have about 15% of their production in vacation houses in the next five years," predicts President Thomas Korb of Harnischfeger Homes which introduced its vacation-house line in August.

Korb adds: "We are on the threshold of the second-house era. One auto company president has already said that the second car's biggest competitor in Wisconsin and Michigan—big lake areas—is the second or vacation house." Harnischfeger prices its vacation house package just below a second car: \$1500 without floor.

A lot of other home manufacturers agree with Korb. Among the big manufacturers, vacation-house leaders (besides Harnischfeger) are Admiral, Kingsberry, Ford, and Techbilt. About 25 smaller prefabbers are also making vacation houses. In Canada, Colonial Homes of Toronto has been doing vacation houses for ten years, is now building 1,000 a year. On the other hand, National Homes is not making vacation houses to meet the second-house market because it finds that its buyers use shell houses or low-priced manufactured houses for a second home.

There are two reasons why the vacation-house business is attracting home manufacturers

Reason No. 1: Most vacation houses are built on odd lots. This gives the prefab dealer an edge over the conventional builder. He wastes little time waiting for materials because the whole package is delivered to the site at once—and erected immediately. Says Harnischfeger's Korb: "In odd-lot

work, a prefab dealer with a simple, easy-to-build package can build for 20% less than a conventional builder."

Reason No. 2: Most vacation-house building is not hampered by local codes and union restrictions. So prefabrication can make the most of its logical building methods, many of which would not be possible with a standard house.

One result is speed. Harnischfeger says its vacation houses can be erected on any lot by three men in one day (see photos, p 114). Another result is the use of better engineering techniques. Kingsberry ties the house to the ground with aluminum earth anchors (secured to the roof with aluminum cable) instead of anchoring the mass of the house to the footings. Pease Homes' vacation house is a geodesic dome (H&H, Dec, '58) that costs less than \$2 a sq ft. Lytle Modern Homes (Dearborn) has a compact vacation unit that is assembled in the factory and moved to the site on a trailer like a mobile home. (Canadian prefabbers frequently build vacation houses with ranch-plank walls that eliminate studs. But US manufacturers find this a drawback and point out that buyers want studs so they can insulate and finish walls at a later date.)

Prefab vacation houses, like other vacation houses, are financed by character loans

Any other kind of loan involves all the construction limitations and other regulations tied in with FHA-insured mortgages.

Commercial banks and S&Ls recommend that a family use its home in town to secure a loan on a leisure cabin. Once the loan is secured in this way, the lender is no longer concerned about the type of construction in a cottage or the value built into it.

Can an open-end mortgage be adapted to a vacation house on the basis that it is an extension of the owner's primary home a few miles away? Not at present.

Shell houses continued to attract home manufacturers in 1959

Prefabricators were putting more production into "finish-it-yourself" houses this year to reach three markets they otherwise wouldn't share.

Market No. 1 is made up of people who own a piece of ground but can't afford to put more than \$3,000 to \$5,000 into a house. National Homes finances these low-price houses through its acceptance corporation. But many shell-house makers—inside and outside the home-manufacturing industry—must rely on balloon-note financing (which straps the low-income buyer and involves him in an endless chain of re-financing).

Market No. 2 is made up of people who want a house that will eventually be worth \$20,000 but who can't get more than an \$8,000-\$10,000 mortgage. Prefab dealers help these buyers by taking them to a local lender to get a construction

loan, which, upon completion of the house, is turned into a first mortgage (15 or 20 years). The dealer guarantees that his buyer will finish the house within a given time after the shell is erected.

Market No. 3 is made up of people who would rather do part of the work on a house themselves than earn extra money for a house and then pay part of their earnings in income taxes.

The "finish-it-yourself" business should gain momentum next year

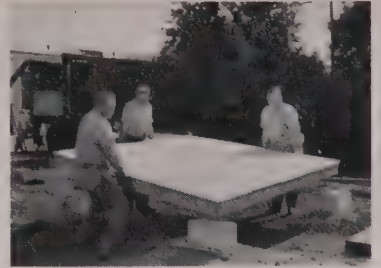
Pease, Midwest, and Admiral will join National and Inland with new shell-house lines in 1960. About 15 smaller manufacturers—some of whom started in business with shell houses

continued

Here is how three men erect a vacation house in one day



1 Concrete blocks are placed on precast pads dropped on ground for Harnischfeger house.



2 Floor panels (8'x8') are set on blocks. Combination finished and subfloor is 1" stock.



3 Floor panels are toe-nailed together with spikes through 2x8 framing members.



4 Wall panels (2x4 framing with vertical sheathing-siding) are nailed through plate edge of floor.



5 Erection starts at corners to give initial rigidity. End-wall panels are shaped for roof slope.



6 Back-wall erection progresses until end corner is turned. Framing is spaced to fit window openings.



7 Front wall is erected. Windows are aluminum. Framing lets owner insulate and finish with drywall.



8 Partitions are installed. Doorsill framing, needed for handling, is cut out after erection.



9 Job is at halfway point here. End floor panels, foreground, form porch. Siding has V joints.



10 Column is installed between bedroom doors to support ridge beam. Bathroom door is at right.



11 Double 2x12 ridge beam goes up, rests on porch column, end walls, and column in previous picture.



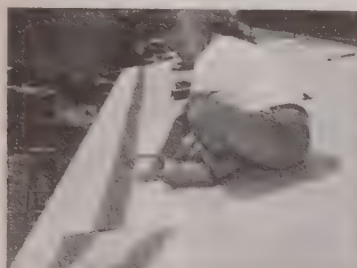
12 Header beam is placed over corner windows to carry roof panel over non-structural window section.



13 Roof panels (2x4 framing with insulating fiberboard deck) are set on side walls and ridge beam.



14 Roof panels are toe-nailed into ridge beam and wall plates. This is roof section over porch.



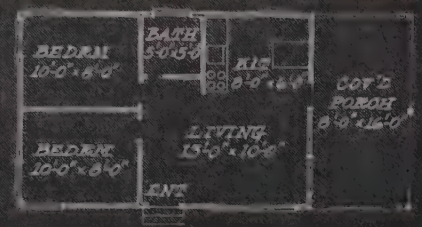
15 Shingles (white asphalt to throw off summer sun's heat) are nailed directly to insulating roof deck.



Finished vacation house sells for under \$2,100 on buyer's lot. Redwood siding needs no paint or

stain; porch gets coat of deck paint. Kitchen is equipped with range, sink, and table. Refrigerator

and porch screening are optional extras. Open floor plan has 384 sq ft of space.



—continue to find these houses an important part of their volume. But for the leading manufacturers, shell houses still account for a small share of sales (less than 4% this year).

Prefab dealers see two big advantages in shell houses:

1. They generate few customer complaints (the finishing of the house, source of most complaints, is up to the buyer).

2. They bring in business from owners of odd, isolated lots, on which FHA won't approve loans.

Some home manufacturers also saw new possibilities in the apartment-house market

But this year only two of the leaders—Harnischfeger and Great Lakes Homes—were actually in the business. And they started only at the urging of a few of their best dealers in metropolitan suburbs.

About 15 smaller manufacturers occasionally were doing apartment houses on a custom basis for builder-clients. But these units are never part of their regular lines.

Home manufacturers are interested in apartments for the same reason as conventional builders:

1. The market for apartments may grow even faster than the market for houses (H&H, Oct '59).
2. Land prices are so inflated that fewer and fewer families can afford single-family lots in close to city centers.
3. Half the apartments in many metropolitan areas may need to be replaced or rebuilt in the next ten years.
4. In some metropolitan areas, homebuilders—either con-

ventional or prefab—can build apartments cheaper than commercial builders because they get the homebuilding rates from trade unions instead of higher commercial building rates.

Why weren't more home manufacturers in the apartment-fabricating business?

There were two good reasons:

1. Stiff competition from conventional builders. An apartment project is a repetition of many similar units. So the conventional builder can get the benefits of volume production. He can even set up his own prefab line either out on the ground or in the building itself.
2. High initial costs. Apartment fabrication means special tools, and a special production line. All this adds up to a bigger investment in plant. Most home manufacturers aren't willing to take the gamble.

But all through the year, the prefabbers were running into more outside competition

Prefabrication is a free ball today. Anyone with enough capital to set up a shop can capitalize on its techniques. So it's not surprising that this year home manufacturers faced more competition than ever before.

They faced more competition from lumber dealers. More and more lumber yards are prefabbing wall panels—either Lu-Re-Co's or their own. Most of this competition is in the East and Midwest, but it is spreading to the Southwest and the West Coast.

They faced more competition from precutters and shell-house fabricators. These operators are tough competition for two reasons:

1. They are selling to the low-price market—traditionally home manufacturing's strongest suit.
2. They are selling prices and terms that sometimes look more attractive than those offered by home manufacturers.

One shell manufacturer—Main Line Homes, Philadelphia—even has a live-now-pay-later plan. Main Line erects a house on the owners' lot without down payment or settlement costs. Payments on a short-term balloon note begin six months later.

Another shell manufacturer—Jim Walter, Tampa—may be the nation's second biggest builder. He sells 12,000 shell houses a year through 75 branch offices in 16 southeastern and southwestern states. Average down payment: \$70.

They faced competition from big conventional builders. Two examples: 1) John Long of Phoenix is plant prefabbing all the carpentry for his houses; 2) Abe Johns of Tampa is entering the panel-fabricating business.

They faced competition from big mobile builders. Centex, Campanelli, Hoffman, Woodrow, Heftler, and many others,

are not far from being nationally recognized names. These big builders are invading the home manufacturers' stamping ground—the lower-price market around large cities. They move from one metropolitan area to another, and use their bigness effectively in holding down the cost of production, sales, and financing.

Until recently, prefabbers sold almost all of the lower-price market in many midwestern metropolitan centers. But the situation is changing fast. For instance: Pease Woodwork points out that six big mobile builders are building about fifteen tracts in and around Cincinnati.

And still more competition is in the offing some of it from surprising sources

As the year came to a close, there were rumors that aircraft manufacturers would swing part of their cutback defense capacity into fields like housing. No one in the aircraft industry would make a statement, but it was increasingly evident that housing—the biggest US industry—was a likely place to put excess industrial capacity.

Materials manufacturers are also interested in prefabrication. In Detroit, Koppers, and Masonite are already making sandwich panels with polystyrene foam cores and Masonite skins. Many other manufacturers are studying the experience of outfits like Celotex and Homosote who were in the housing field before and during World War II.

How are home manufacturers reacting to competition? They are lowering their costs, stressing their services, and broadening their lines. And one prefabber—US Steel Homes—is considering going into a large-scale component manufacturing. US Steel believes its steel-framed house has proved the economy of using some steel components, now wants to come up with components that will be acceptable to builders all across the country.



Here is how today's prefabs are made

In the above photo you see manufactured-house components being loaded onto a truck for delivery—the last operation on a long and efficient production line.

Below and on the following three pages are sequence photos of some of the in-plant operations that lead up to this point. These photos show you—as no words could—how jigs and automatic machinery and mechanized handling equipment can reduce unit labor costs to a practical minimum.

But the photos don't show the engineering that went into the development of the production line. And they don't show the intricate control system needed to schedule thousands of house variations, keep materials flowing to the line, keep track of purchasing and billing and cost accounting.

All photos were taken in National Homes' main plant in Lafayette, Ind., which can produce 50 complete house packages a day.



1

Manufactured house starts in this sprawling yard where trainloads of lumber arrive daily to maintain the prefabricator's inventory of six-million board ft. Most lumber is banded, handled by forklifts.



2

Dimensioned lumber for framing and truss parts is cut on this double-end saw. Saw can be set up to make cuts at any angle. All cuts are precise since pieces must fit into production-line jigs.



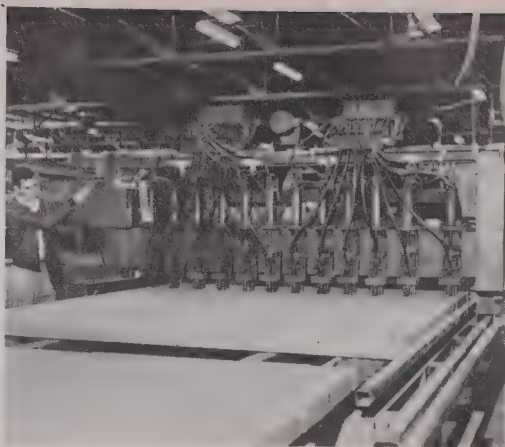
3

Assembly line starts here, where plates, sills, studs, and preassembled framing components are put into jigs and nailed. Subassemblies, such as window framing section, are made on jigs in background.



4

When panel frame is complete, it gets an IBM production ticket, which identifies it, shows it is for house No. 168,211. IBM numbers are key to ordering, manufacturing, accounting, and delivery.



5

Next, panel frame is faced with drywall, which is glued in place, then nailed in this pneumatic nailing machine. Nailer drives full row of nails at once. Nail pattern is varied with panel type.



6

After drywall is nailed window and door openings are cut out by two-man router. Shoulder of router bit is held against the lumber frame opening and acts as a guide for correct size of the opening.



7

Fiberglass insulation batts are glued into place, after panels have been turned over by mechanized rack (rear of photo). Panels rest on metal rollers, are pushed along assembly line.



8

Drywall backer board (for aluminum "board and batten" exterior skin) is fastened to the panel frame, and then adhesive that will hold the skin is applied through pneumatic tubes.



9

Meanwhile, aluminum skin is finish painted. It moves through paint booth on conveyor, while four-jet spray moves back and forth. From here, skin moves to baking oven, then to assembly line.



10

Aluminum skin is fitted to exterior of panel on top of drywall, tacked to hold it in place as it moves down the line. (Sheets arrive from aluminum supplier preformed, precut, and prime painted.)



11

Aluminum skin is pressure bonded to panel in a roller press. Press applies 20 lbs per sq in. of pressure and spreads the adhesive uniformly over contact area of skin and drywall.



12

Aluminum windows, purchased outside, are glazed in the plant. First a moisture-proof seating compound is air-gun applied, then the glass fitted in place. Finally, neoprene strips seal in glass.



13

Windows are fitted into place while panels are still on assembly line. Aluminum nails are used to fasten windows securely in place. Windows have a factory-baked acrylic enamel finish.



14

At end of wall-panel assembly line, panel is tilted up by pneumatic rack, then transferred to an overhead monorail for trip to loading dock. Panels are handled upside down to protect bottom lip.



15

Every panel is checked by an inspector as it comes off assembly line. He staples "ok" ticket to panel, notes IBM ticket number, makes sure panels grouped together are for the same house.



16

Truss making is one of many sub-assembly operations. Precut truss members are held in a vertical jig by air cylinders, as carpenters tack toothed steel gusset plates to both sides of truss.



17

Trusses are then pushed down the line under high-pressure rollers which drive the teeth of the steel plates deep into the wood to make a truss that is strong and thin (to save space on truck).



18

Finally, trusses are steel-strapped into bundles (two bundles per house), tagged with the right IBM code number, loaded onto big wheeled racks, and moved to the loading area.



19

Gable ends are assembled in another part of plant. Precut wood parts are fitted into a jig and nailed. Then backer board and aluminum sheet with factory baked-on paint is nailed in place.



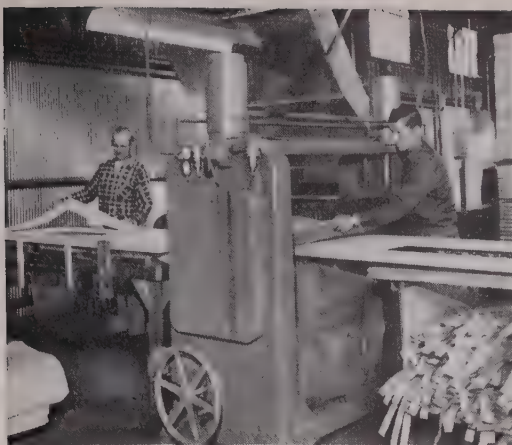
20

In another subassembly operation, aluminum strips are fastened to roof purlins by pneumatic nailing machine. (On site; aluminum roofing sheets are riveted to raised batten sections of these strips.)



21

Interior doors are carried by conveyor (in background) to painters who spray both sides, then to drying oven (not shown), and finally to man in foreground who feeds them through a grain printer.



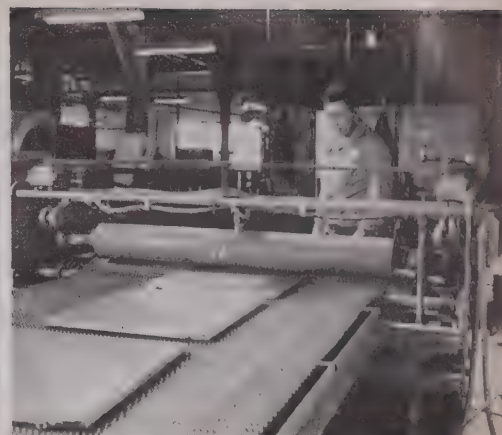
22

Aluminum sheets are bonded to each side of exterior doors by high-pressure laminating press. Doors are standard sizes, can be produced ahead of schedule and stock-piled until needed.



23

Doors are glazed and prehung to reduce number of pieces on the truck and to cut installation time in the field. Each door has a small package of hardware attached to its frame.



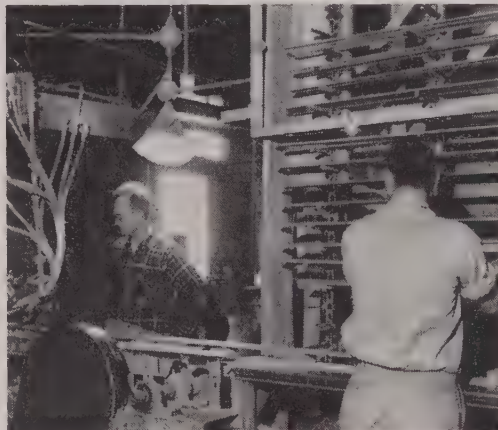
24

Kitchen cabinet doors are prime-painted in this roll-coater. From here, the doors travel to the drying oven and then to a similar roll-coater which applies the final coat of paint.



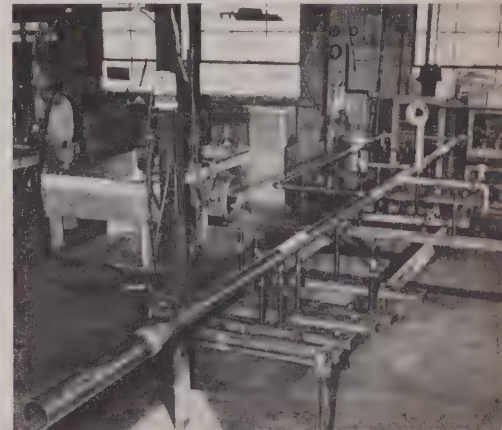
25

Cabinets are assembled at 650-a-day rate on this line. This process includes hanging the doors, attaching magnetic hardware, inserting plastic drawers, and adding the door pulls.



26

Interior trim is carried on conveyor belt through automatic spray booth. As it leaves booth, man at right puts it on a moving web that takes it through drying loft. Later it is grain-finished.



27

Prefabricated plumbing, like this long tree for a split-level house, is made in plumbing shop and stock-piled until needed. Only a few joints are required to finish installation at site.



28

Cartons of miscellaneous materials (calking compound, nails, bolts, screws, etc) are carefully packed. Each has IBM identification number to make sure package is complete.



29

At loading dock, rope-controlled switches shunt panels along the right tracks and to the waiting trucks. Foreman makes final check of IBM numbers on all parts and materials.



30

Finally, all parts and materials are fitted onto a truck by monorail. Parts that will be needed first at the site go on last, so they can be lifted from the truck directly into place.



A sampling from the home manufacturers' 1960 catalogs shows

More features, more livability, more value per dollar

On the next nine pages you will see 19 of the hundreds of stock models home manufacturers will be offering in 1960.

Taken as a group, they reflect important trends in the development of manufactured houses:

They have more features included in the basic package—features like wood paneling, finish flooring, and complete gas or electric kitchens.

They have more livability because manufacturers have, in general, taken full advantage of the new FHA-MPS by putting bathrooms or the kitchen in a central core and keeping valuable outside space for living, family, and sleeping rooms. And nearly every house adds outdoor room by including sliding-glass doors and provisions for patios and terraces.

They are more flexible in plan and styling. Kingsberry, for instance, offers a house in which the kitchen can be moved or a bathroom added without changing the basic package. Tech-built and Scholz houses can be enlarged by the addition of 4' panels. General Homes' wood-paneled garage can be made into a family room; and Pease's exteriors can be changed in style with various combinations of windows, doors, and trim.

They have more rooms, but not necessarily more space. Of the 19 houses shown, one-third have at least *four* bedrooms; all have a minimum of three. More than a third of the houses have separate storage rooms; nearly half have separate utility rooms; over half have family rooms.

Not every manufacturer is represented in this sampling, but the models shown are a cross-section of the choice builder-dealers will be offered in 1960. *Prices quoted are for finished houses without land.*



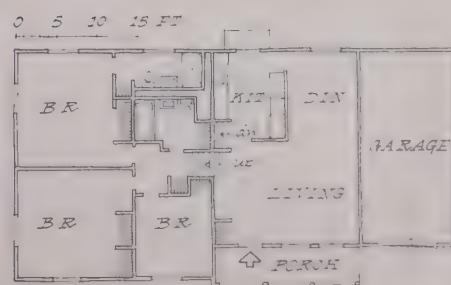
Scholz' Mark 60 (\$40,000)

This big (2,346 sq ft) and striking house features quality materials and equipment, like a Tappan 400 range, a Revco built-in refrigerator-freezer, dishwasher, luminous ceilings, and Formica tile. L-shaped plan is designed to work with two patios (one, off the master bedroom, is completely enclosed) and pool. Four-foot modular system permits Scholz to revise plan easily to meet customer requirements.



US Steel's Lynnfield (\$17,000)

In this new split-level, the studs, trusses, thresholds, windows, shutters, kitchen cabinets are all steel. Furnished with the package: heating plant, water heater, and light fixtures. The house has 1,279 sq ft of space, plus a single-car garage and a porch.

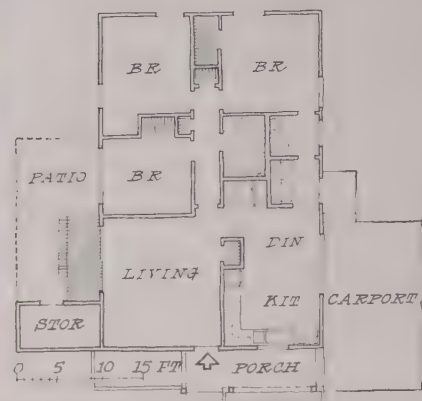


To see more manufactured houses, turn the page



**Kingsberry's Dapleton
(\$13,500)**

Big feature of this design: a choice of exterior finishes. You can get full brick (seen here), plywood and batten, cedar shakes, beveled siding, or half brick. Prices vary with selection. Deluxe package includes kitchen cabinets, luminous ceilings in baths, appliances. Designed by Henry Norris, AIA, house has 1,165 sq ft of living space.



**Presidential's Newport
(\$19,000)**

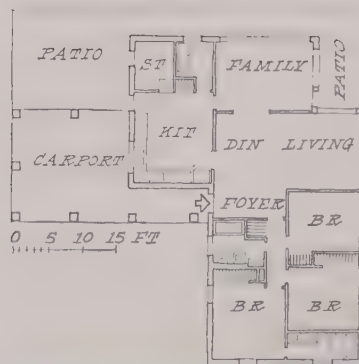
"Colonial outside, a split indoors," is how the company describes this new model. Living area: 1,940 sq ft, plus a one-car garage. Optional extras like a colonial interior trim package, fireplace, a plastic conservatory, patio, and deck can boost price to \$30,000 in some areas. Architect is Lester H. Weckesser, AIA.





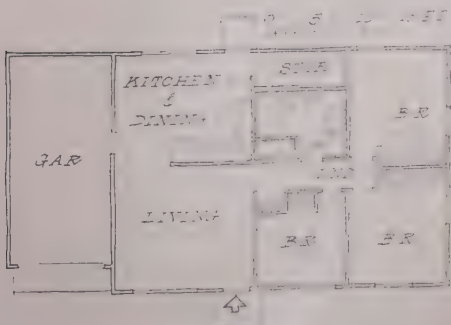
Crawford's Californian (\$21,900)

This 1,606 sq ft ranch model is designed to work with two outdoor living areas at the rear: one patio off the double carport, a second off the family room. Roof is panelized of $\frac{3}{4}$ " sheathing. Optional extras include brick planter in foyer, built-in electric kitchen, separate laundry, flagstone entry.



Inland's Mustang (\$8,601)

The basic package of this 1,254 sq ft model includes factory-applied cedar shakes (optional wood siding shown here), architectural trim, single-car garage. Window muntins are ceramic strips baked on the glass itself. Zoned air conditioning is also available (about \$300 extra installed). This model is one in a series of similar low-cost houses.



To see more manufactured houses, turn the page



National's Lorraine (\$22,525)

"This Regency model is the show house of our 1960 line," says Jim Price.

The front facade is painted brick but all other exterior components—even shutters and doors—are aluminum with a permanent baked-on Lucite finish that comes in a wide color range. New 14" lap aluminum siding on side and rear walls has deep recessed horizontal lines that give the house a crisp, formal look.

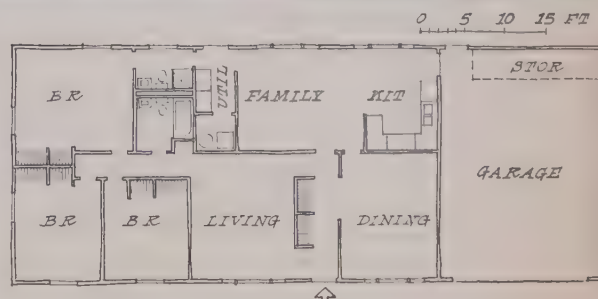
Designed by Emil A. Schmidlin, AIA, the house has 1,812 sq ft of living space. Optionals (fireplace, air conditioning, appliances, etc) bring \$22,525 base price up to \$31,584 without land.





National's Presidential (\$17,020)

This model, designed by Royal Barry Wills, FAIA, features a formal dining room. Package offers aluminum roof shingles, 8" aluminum horizontal siding, deluxe bath fixtures, and kitchen cabinets. Brick front is \$910 extra. Other extras: parquet flooring, slate entry, ceramic tile. Living space: 1,520 sq ft.



Midwest's Lexington (\$23,000)

"A traditional house for the growing family," is how Midwest describes this five-bedroom, two-story Colonial. Package includes a built-in kitchen with counter-top unit and range, and built-in vanities in the upstairs baths. House can be built on slab or basement (\$1,000 more). Living space: 2,046 sq ft.

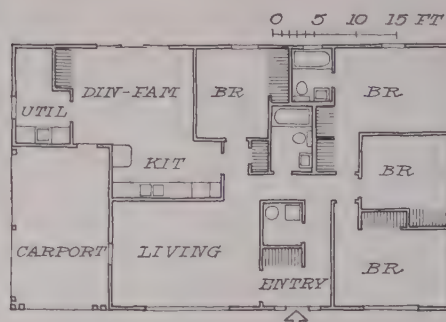


To see more manufactured houses, turn the page



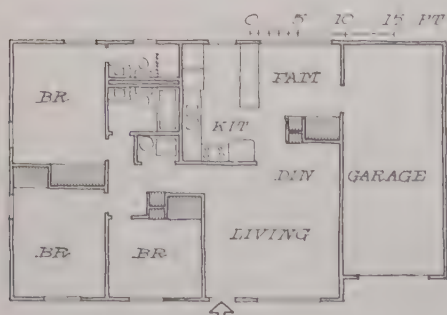
Pease's Spacewood (\$16,450)

"Different window, door, or siding options can change this model to whatever style sells best in your area," suggests Pease. Four-bedroom, 1,546 sq ft house gets extra space at low cost with 32' trusses (see H&H, Sept '58).



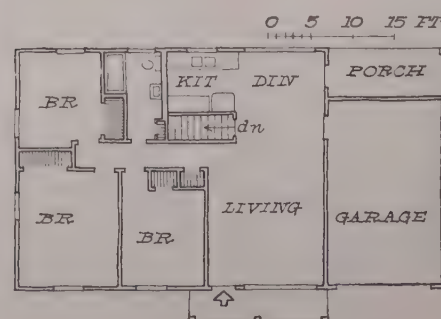
Richmond's Princess Anne (\$13,500)

"We put in storage walls to sell the women," Richmond Homes reports. Walls serve as partitions and storage space. Basic package for 1,070 sq ft house includes four siding choices, birch kitchen cabinets, sink, prefab chimney, shutters, even flower boxes.



Ford's Contemporary (\$14,500)

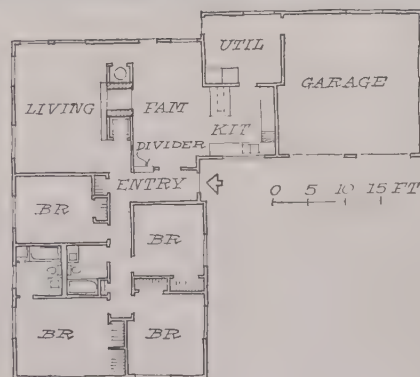
This 1,008 sq ft house package includes wiring and hardware, hot-air or hot-water heating, interior panels with factory-applied drywall, doors and windows hung and trimmed, panelized floor sections with finish floor laid, kitchen cabinets, choice of siding, roofing colors, and window style.





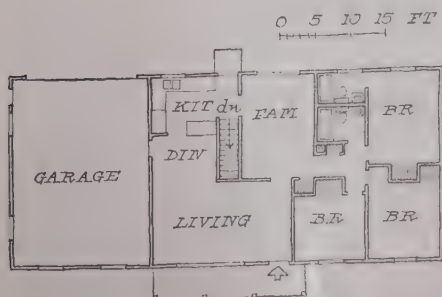
Modular's Cortez (\$24,000)

This 1,653 sq ft L-shaped "Western Ranch" includes rough-sawn cedar siding, redwood divider between entry and family room, paneled walls on both sides of fireplace, and cove lights in sloped living room ceiling. Kitchen cabinets come in mahogany or birch, have Formica tops. House has two full baths, two-car garage, fireplace opening to living room and family room.



Wilson's Lakewood (\$16,500)

Here's a new model that looks longer and bigger than its 1,176 sq ft because the attached garage, left, is faced with the same brick as the house. Shutters, cupola come in the prefab package; as do kitchen cabinets, double sink, bathroom accessories. Carport instead of garage costs \$250 less.

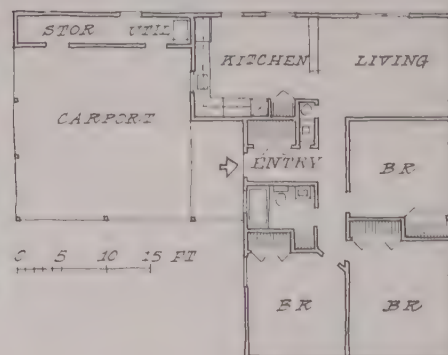


To see more manufactured houses, turn the page



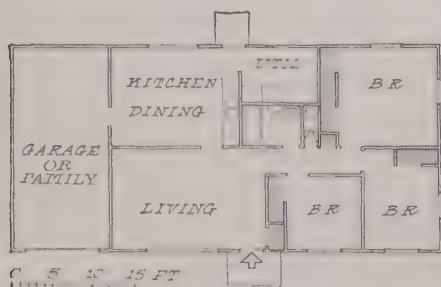
Holiday's Worthaven (\$9,950)

"Ample storage is a big selling feature of this 1,054 sq ft house," reports this company. There are 80 sq ft of storage in carport, extra closets off entry, and in kitchen. Folding closet doors, kitchen cabinets, built-in oven and range, and sliding-glass doors off living room come with the package.



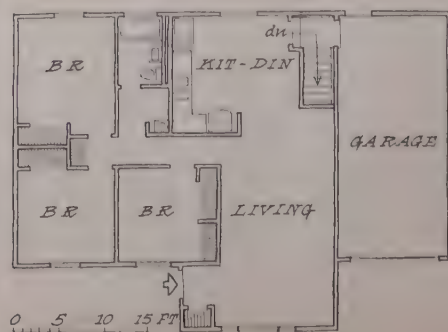
General's Scotsman 60 (\$10,950)

This model comes complete (with plumbing, wiring, heating, hot-water heater) except for kitchen appliances. Interior wall panels are pre-decorated and pre-wired. Mahogany paneled garage can be used as family room. House has 901 sq ft plus garage and 120 sq ft of finished space in attic.



Harnischfeger's Clayton (\$14,000)

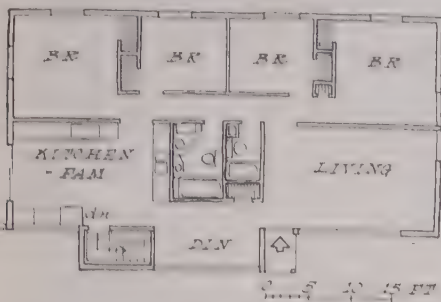
New entry in the company's "Family Plan Homes" line has 1,015 sq ft of living space, plus basement and garage. Basic package includes factory-applied drywall, prehung doors, windows installed and trimmed. Roof panels fit on trusses spaced 4' oc. Various siding materials are optional.



HBC's Model 848

(\$13,500)

This model is planned around a central plumbing core. All bath fixtures and accessories are included in the package. Four bedrooms and separate dining room are featured in the 1,300 sq ft house. Sliding-glass doors open the kitchen and the family room to a patio screened from the street.



Techbuilt's Andover

(\$32,000)

Company's new one-story house, built in a T-shape, has 2,524 sq ft of space. Hotpoint built-in oven, cook top, dishwasher, disposer come with the package. So does hot-water heating, but plumbing is extra. A more conventional partition system replaces free-standing storage walls that marked earlier Techbuilt models. Closets in new system have bi-fold doors. Optionals include cork flooring, wood paneling.

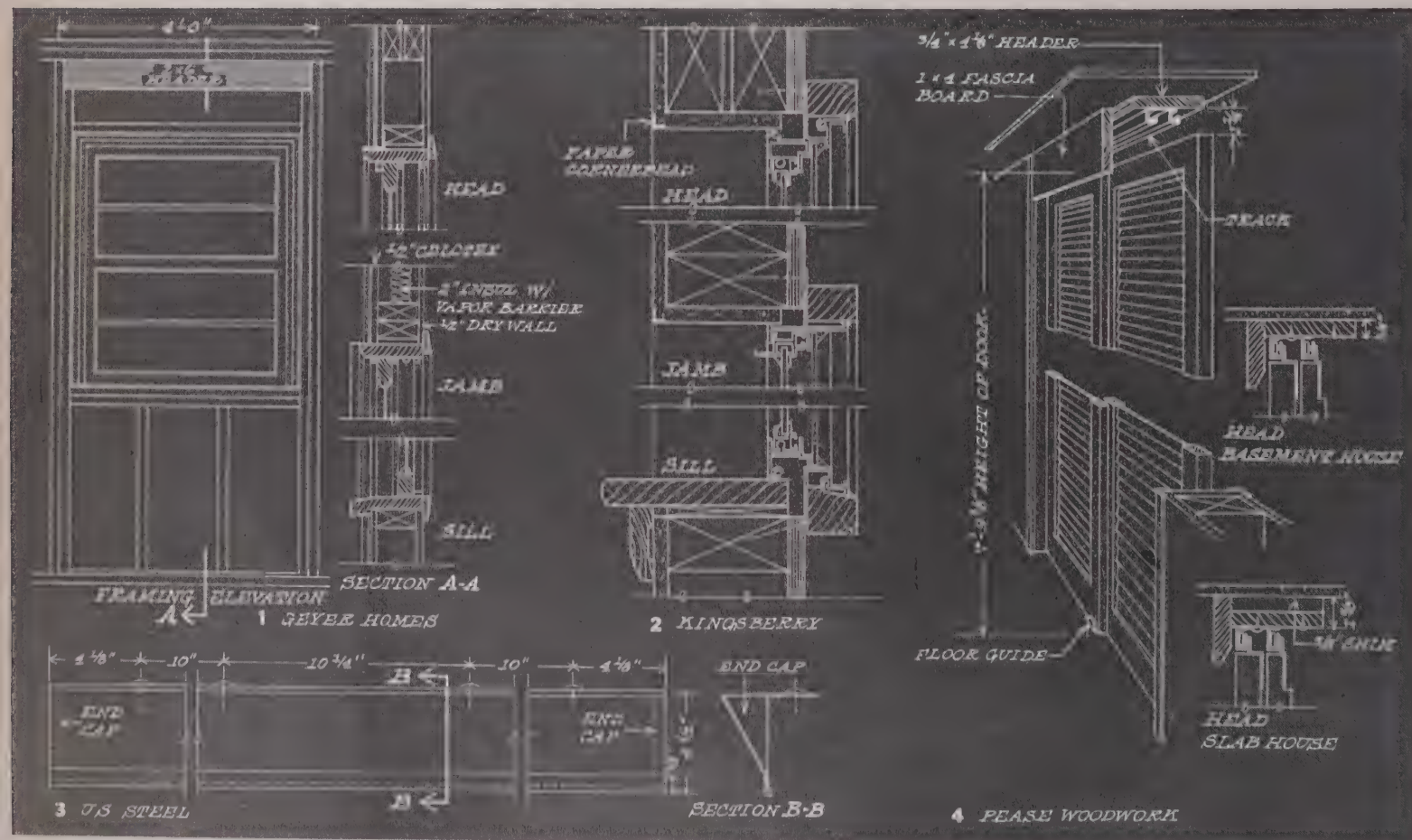


Here are new construction details from the 1960 prefab models

The working drawings for next year's models show how the home manufacturers are engineering a better product. They also show plenty of good construction details that can be used by small and big builder alike.

Better engineering by the home manufacturers means two things. It means fewer pieces and parts—using less material to do the required building job. And it means a higher degree of quality. Most of the engineering has concentrated on improvements in the framing systems (the shell, or basic structure) and the finishes (siding materials, paints, and plastics).

The better-engineered details shown on this and the following pages deal basically with the house's structure. To make it easier to study these details, HOUSE & HOME reports them in four major groups: doors and windows, walls and floors, roof systems, and overhangs.



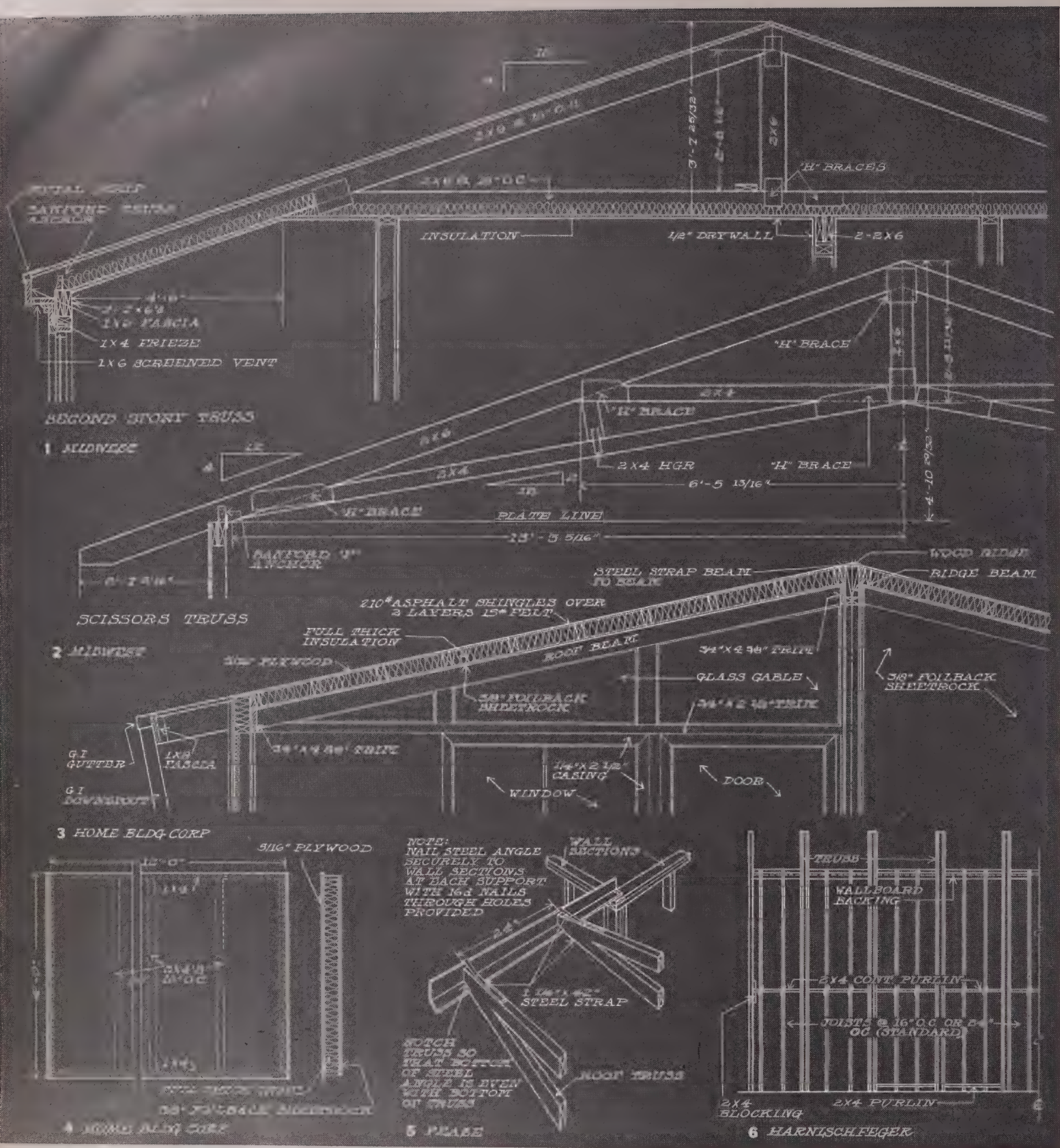
Windows and doors

The four components shown above are outstanding examples of today's door and window engineering. Each results from study of a different problem. (1) The double-hung window by Geyer Homes is a structural component; window, framing, and sheathing form a complete unit. (2) By using a sheetrock return on its aluminum windows Kingsberry Homes saves money. A paper cornerbead protects the sheetrock. (3) US Steel finds that the metal threshold support under a door sill is cheaper than 2x4s. (4) Pease Woodwork uses a deep fascia to hide the track of sliding closet doors. The header for the track fits into grooves in the fascia; the track can be raised or lowered to adjust to different ceiling heights by

fitting it into the upper or lower groove.

Other manufacturers are working on doors and windows too. Among the ideas not shown above are these by National: a new vinyl finish for all interior doors and an aluminum, laminated door for all exteriors, to reduce maintenance; a new snap-on door trim that cuts installation at the site, and a neoprene glazing strip for all windows, eliminating putty.

In cold-weather country, Harnischfeger uses two aluminum windows, with a wood stop in between, rather than double glazing, and finds it helps to sell houses. And to keep the door trim from splitting, it is glued and nailed to the jamb.



Roof framing

Careful engineering has been applied to roof structures to cut out waste and use materials to their utmost strength. Good evidence of this is shown in the six roof details above. (1) To keep the roof line low on a two-story house and still get the economies of truss construction, Midwest uses a king-post truss system. (2) Midwest can put a cathedral ceiling over a living room with a new scissors truss. (3) Home Building Corp uses a stress-skin panel supported on the ridge beam and on the rafter beam 4'oc. Even the trim on the ridge beam is put to work; it helps position the rafter beams and the panels. (4) These stress-skin panels are ceiling and roof panel combined. (5) Pease Woodwork has

a detail on how to change truss direction in L- and T-shaped houses. Pease uses a steel angle and strap to hold the truss system together at the turn. (6) Harnischfeger's roofing system uses glued-nailed trusses 4'oc, and cuts down framing lumber with 2x4s as purlins between the trusses.

And progress is being made in details of the roofing systems. Kingsberry uses ply-clips (not shown) to cut roof sheathing thicknesses from 1/2" to 3/8", saves \$60 to \$70 a house and meets MPS requirements. Scholz (as well as some other manufacturers) uses a continuous ridge vent to omit gable-end louvers so that glass gable ends can be used instead.

What you can expect from prefabrication in the '60s

An appraisal by *Richard O'Neill*

Each year for the last ten years, home manufacturers have been improving their product. Every year, they have added more and more to the house package. Every year, they have made improvements in the engineering of their houses. Today, home manufacturers offer stronger and tighter and higher quality houses than some conventional builders offer in the same price range.

But there has been no dramatic breakthrough in technology.

While today's wall components are stronger and better insulated, they are not fundamentally different from the panels Homasote developed for house production in lumber yards back in the 1930s. The complete two-piece bathroom Buckminster Fuller designed for Phelps Dodge in the same 1930s is still more advanced than any plumbing package offered by a manufacturer today. There have been almost no new developments in foundations since Frank Lloyd Wright proposed hanging a Chicago skyscraper from a central mast in 1920, and Fuller developed a similar central-mast "foundation" for his Dymaxion house in 1927.

As a result, the extent of prefabrication in a manufactured house has not increased drastically since the day—in 1892—that Hodgson Homes sold its first prefab in Dover, Massachusetts.

Today only about 33%* of the price the consumer pays for a manufactured house (without lot) goes for the prefabricated part of the house—which means there is still not nearly enough prefabrication in a prefabricated house.

This is another way of saying that 67% of the price the consumer pays goes for conventional goods and services:

*This is a rough average. In some cases the cost of the prefab package may be more than 40% of the selling price of the house without lot. In other cases it may be less than 25%.

foundations, mechanical and finishing work, financing, sales and builder's profit.

It is easy to see why the degree of prefabrication in a manufactured house has not increased more than it has: With few exceptions, manufacturers have not been able to get beyond the experimental stage in prefabbing the expensive parts of the house—the mechanical work and the finishing work. (Prefabber Pete Knox puts it this way: "We've been prefabbing the wrong part of the house.")

This is the reason that manufactured homes have not yet made the spectacular changes in home-building technology that everyone expected they would.

... and this is the reason that manufactured homes still account for less than 10% of new starts. In 1950, 6% of new starts were manufactured homes. Only five years ago, some experts were predicting that by 1960 25% of new starts would be prefabs. The 1959 figure: 9%.

But 1960 may well be the year that home manufacturers start the drastic technological change that housing industry experts have long predicted.

Home manufacturers are well aware—much more aware than most people in the housing industry—of the opportunity offered by the coming need for housing in the 1960s and '70s. They are well aware that in the 1960s they can make a big breakthrough in sales if they make the long-expected breakthrough in technology. Right now, all of the major prefabbers are deep in research that may drastically change the house package they offer. In short...

The home manufacturers may be on the verge of producing a truly industrialized house—a house based on drastically new concepts that will drastically cut manufactured-house costs.

Their aim is to build practically all of the house in the plant where unit costs are much lower; and thus to reduce on-site work to a minimum. They are shooting for the same degree of prefabrication in the manufactured house as the mobile-home manufacturer gets in his product: A mobile home requires no field labor except electrical, water, and waste hook-up. Mobile-home plumbing costs are one-third the cost of conventional plumbing; the best prefab systems are only 50% cheaper than conventional plumbing. Painting and finishing costs for a mobile home are only one-third conventional field costs for brush-paint finishing.

In order to achieve this much higher degree of prefabrication, home manufacturers are hard at work to solve these problems:

1. The problem of codes. Says code expert Carl Boester, "There is not a code in the land that prevents the use of a good new system, if you are willing and able to provide engineering analysis, complete data, and time to work with the code body." The home manufacturers are now doing just that, all across the country.

2. The problem of high on-site mechanical costs. This is probably the biggest single chunk of on-site costs in a prefab house, but the best most prefabbers have done so far is to ship a completed plumbing tree with their package. This is a stop-gap measure that does not cut costs drastically, because the builder-dealer still has to get a plumbing subcontractor in the field, and because the plumber often fights the use of the tree because it cuts into his business.

Today, HMA reports, the development of a completely finished mechanical core is top priority for most home manufacturers. The feasibility of such a core has been demonstrated by the Budd Company, makers of railway cars; by the Montecatini chemical interest in Italy (for details, see H&H, Jan '58); and by the Homebuilding Corp of Sedalia, Mo.—which right now offers its builder dealers a complete mechanical core that requires only one water connection, one waste connection, and one electrical connection at the site.

3. The problem of better panels. Until now, the home manufacturing industry has been limited to "2x4 engineering." But today, every major prefabber has a research program to design and develop sandwich panels which are cheaper, lighter, and easier to install than today's framed panels. These programs are strongly backed by materials manufacturers. Reynolds, Alcoa, US Plywood, Koppers, Masonite, Monsanto, and Dow are just some of the big producers who are helping to develop new wall panels, roof panels, and other components.

The huge stake of the home manufacturers in this development is easy to figure in dollars-and-cents: framed exterior wall panels cost from 45¢ to 55¢ a sq ft. Sandwich panels should cost a maximum of 30¢ a sq ft—and can be used not just for walls, but for partitions and for roofs (which even when built with trusses today can hardly be considered prefabricated). Other advantages of sandwich panels: easier handling, lower shipping costs, much easier and cheaper installation. For more details on sandwich panels, see H&H, Dec '57, p 142, May '58, p 200.

4. The problem of high on-site finishing costs. All of the smart home manufacturers are developing industrialized finishes for their industrialized houses.

One of the main reasons prefabbers are using aluminum is that it is the best substrate or base they can find for finishes. But there are many other possibilities:

Aluminum foil may prove better than sheet as a base for finishes, because a glued-on foil would have the same dimensional characteristics as the material (Masonite or plywood or gypsum) it is glued to.

Acrylic enamel for walls, polyurethane paints for roofs, and plastic materials for interior surfaces are all in the development stage.

There is even a possible substitute for gypsum surfaces: 1/8" veneer of Douglas fir, dried and stretched, then glued between prefinished craft-paper faces.

Both aluminum-sheet roofing (already in use on some prefabs) and aluminum-skin panels have finishing-cost advantages over conventional roofing.

Development of floor panels with pre-finished surfaces could reduce floor-finishing time in the field. And several manufacturers are already using pre-finished, snap-on trim around doors and windows.

5. The problem of high foundation costs. Several manufacturers are trying to develop a system for including foundations as part of the industrialized-house package. Two systems are already being used in vacation houses: 1) precast pods or sections of lightweight concrete aggregate that can be dropped on a graded and tamped site, and 2) stressed-skin floor panels which can be set on low-cost, pre-cast piers.

6. The problem of transportation. The development of complete mechanical cores and bigger, finished wall, roof, and floor components—which will be assembled and finished in the plant—will require the development of basically different systems for transporting the house package to the site. These components will simply be too big to fit the trailers used by all prefabbers today.

Don Scholz, who several years ago developed an experimental package consisting of two "outside" sections and a mechanical core, worked out a system for transporting his huge components on three trucks. During the war, several systems were developed for transporting assembled houses on flatcars.

And today other, rather more dramatic, systems are under development by manufacturers:

Some manufacturers are considering assembling the whole house, putting it on wheels, and towing it to the site.

Some home manufacturers are considering modular, mobile units that can be clustered in various ways to make various models. Architect Rufus Nims of Miami thinks that these units could be produced at a cost of \$4 a sq ft, not including the core unit. This is cheaper than either a mobile home or any presently developed prefabricated house.

And some manufacturers are seriously considering helicopters for transportation of the industrialized house from plant to site. 90% of the weight of the house could be carried by gas bags, so only a small helicopter would be needed to do the moving job. The only problem: in most areas, the CAA would probably object to the airways being cluttered with floating houses.

Industry experts feel that all these problems can be solved—if not in 1960—at least within a very few years. If they are solved, the industrialized house will be a reality, and we will see spectacular growth in prefabrication's share of the market. /END



VARIETY OF LEVELS is shown in change from bold balconies, left, to brick-walled terrace, right, and steps leading to yard, far right.

Here's an exciting way to use a hillside

This custom house in Arkansas gets both a sense of movement and a sense of strength and security from the way it fits its hillside site.

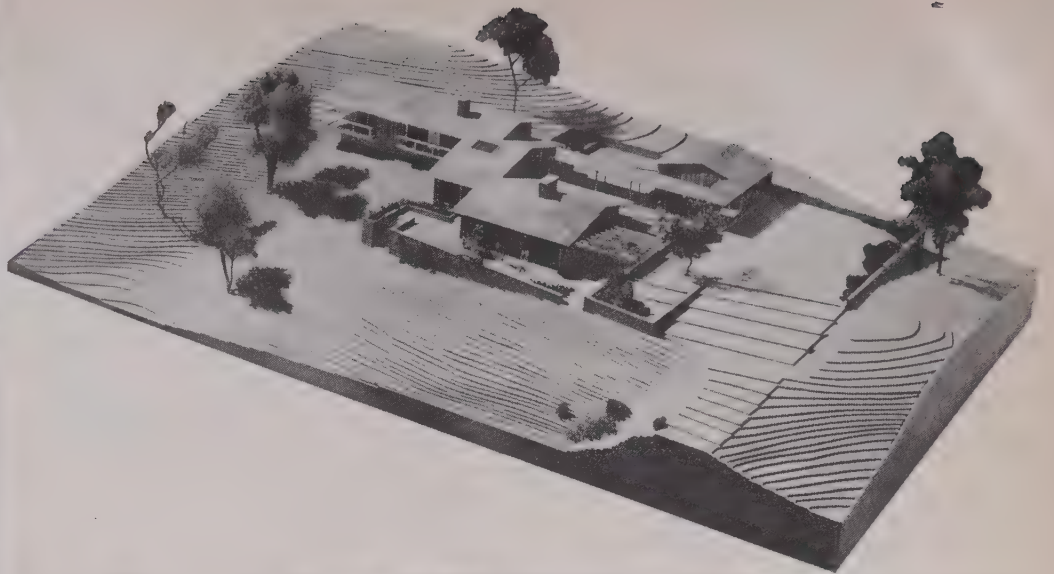
It has a sense of movement because Architect A. L. Aydelott broke the house into three major units, offset them on three different levels down and across the slope, and then emphasized the irregular form with jutting balconies and bold brick walls.

It has a sense of strength and security because Aydelott used brick walls and broad overhangs to emphasize the massive quality of the house and the way it is set into the hillside.

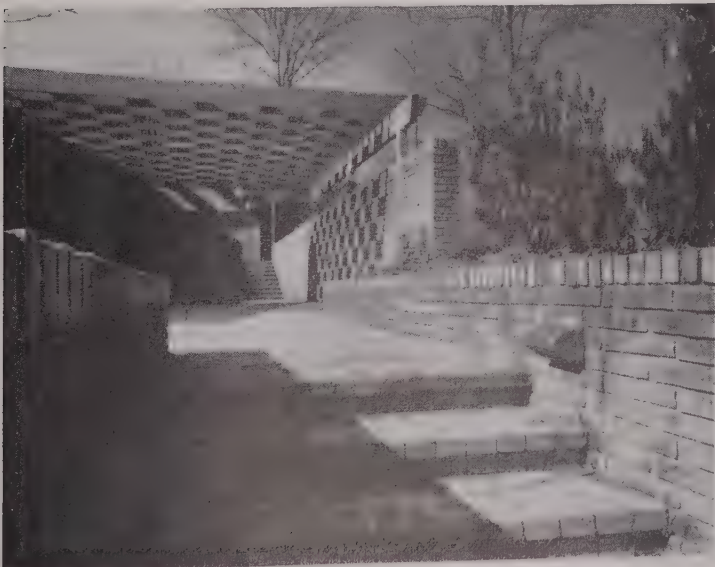
In this multi-level house, the entry is on the middle

level. The bedroom wing is up a half-flight from the entry, the conservatory is down a half-flight, and the living room is another two steps lower. Outdoors, levels change too; steps lead from the entry walk down to the dining and living terraces, and from the terraces down again to the walks that wind around the site. The unifying element is the pitched roof (see model, opposite); it even covers the long walk that leads to the carport.

Minor excavation made it possible for the living wing to open directly to ground-level outdoor living. The bedroom wing (foreground, photo above) is raised a full story, so it has off-the-ground balconies. All terraces and balconies are placed on the view side of the house.



PLOT PLAN AND MODEL explain how house fits into site. Model shows how all of house except bedroom wing is set on a plateau. Carport, living wing, and entrance walk form an entrance court. Two bedrooms will be added along this court, off present bedroom wing.

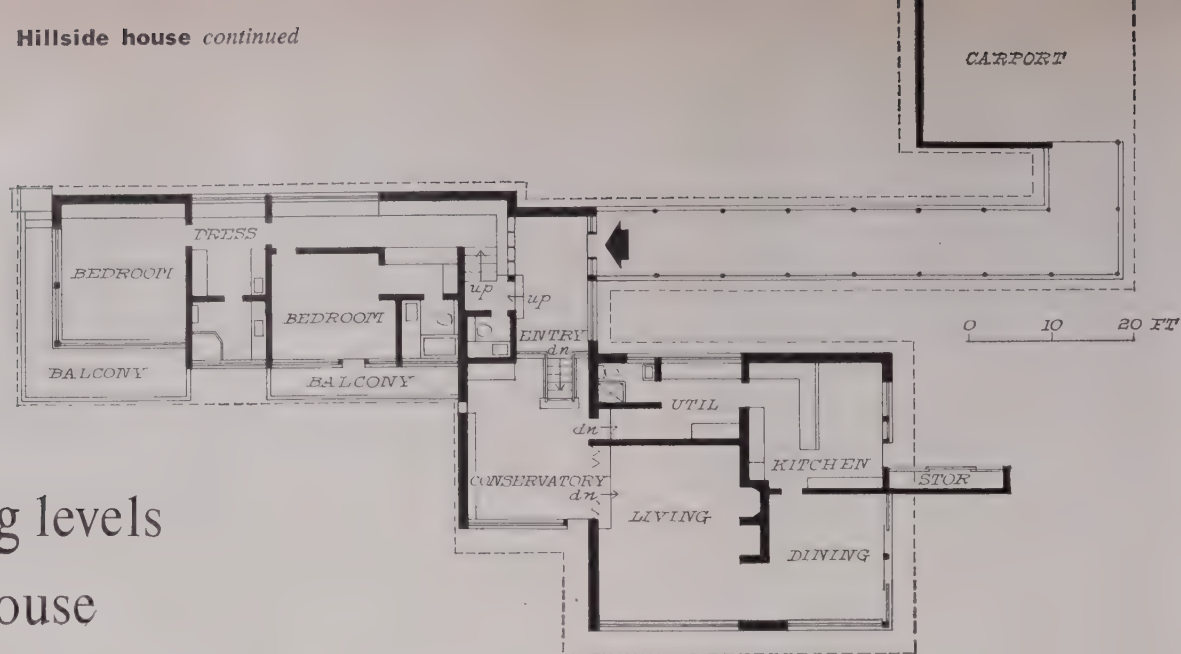


BRICK WALLS AND WALKS surround the house and extend it onto the site. Trellis (background) helps set dining terrace apart.



LENGTHY WALK leads from carport to entry. Steps (left) lead to dining terrace. This side of living wing has service rooms.

To see the inside of this house, turn the page



Inside, changing levels
help zone the house
and give each area its own character

ARCHITECT: A. L. Aydelott and Assoc
BUILDER: George Helbig
LANDSCAPING: Eckbo, Royston & Williams
LOCATION: Helena, Ark.



CONSERVATORY, down half-level from entry (right), has hi-fi and library, and is center for small, informal groups. Floor is 1¼" slate.



LIVING ROOM, down two steps from conservatory, repeats brick walls of exterior. Built-in lighting runs length of both living and dining rooms. Glass wall opens to view, but access to terraces is from dining room or conservatory.

PERFORATED BRICK PANEL (right) defines living and dining areas. Apertures in wall are filled with glass.



MASTER BEDROOM (below) is 15'x17'; its balcony runs along two sides; the 15' run is 6' wide. This and the child's bedroom (which also has a balcony) are a half-flight up from entry, well separated from living areas. /END





How one realty firm corners a luxury-house market for 62 builders

In a 175-square-mile area north of Boston, the Robert Stone Co sells at least 75% of all new houses priced at more than \$24,000.

Stone's new-house sales have more than tripled in the last seven years. This year's total: 600 houses averaging \$32,000 apiece.

Most of these houses are, like those at left, designed in the New England tradition. And some of them are close copies of 17th and 18th Century houses in the same area.

Why do 62 builders (who build from 5 to 20 houses a year) turn over all their selling to Stone? Partly because of their confidence in Stone's salesmanship. And partly because of all the extra service, advice, and guidance they get for a standard 5% realty fee:

1. They get a wide choice of designs at reasonable cost. Most designs are by Architect Claude Miquelle, a former associate of top colonial-style Architect Royal Barry Wills (who also does an occasional house for Stone's builders).

2. They get a wide choice of lots in 39 subdivisions—also at reasonable cost. Outside investors put up the money for raw land, but Stone controls its development.

3. They get more favorable financing than many of them could arrange individually. Stone has built up a close relationship with 25 banks, knows which to approach for different kinds of loans—construction, mortgage, or land.

4. They get the benefits of a trade-in program without the risk. This year Stone handled 200 trades.

5. They get newspaper advertising—prepared and paid for by Stone.

6. And they get advice on what kinds of houses to build, when to build them, where to build them, and how to site them.

"These services save me one man a year," says 20-house Builder Dick Hammer, "and I mean the kind of man you couldn't hire without making him a partner." Adds a Stone executive: "These services free our builders to do what they can do best—build houses."

Do all Stone's services demand a huge realty organization? No (see p 142). Why? Because Stone coordinates varied segments of the housing industry (see p 142). Who are Stone's buyers? Mostly business and professional people (see p 142). How does Stone control land? By acting as a professional developer (see p 143). How does Architect Miquelle charge for his work? He uses a system of flexible fees (see p 145). Do some Stone salesmen specialize in new houses, some in older ones? No (see p 145). Does Stone ever take a loss on a trade-in? Almost never (see p 145).

In this north-of-Boston triangle, one realty firm controls 39 subdivisions



IN SUBURBAN AREA, Stone manages 39 developments (black dots) from five strategically located sales offices (black squares).

The firm is the Robert Stone Co, sole sales agent for 62 builders.

Stone's sales volume is large—1,000 new and old houses a year. Its activities are broad—include control of house design, land planning, financing, and merchandising. But its staff is small—only 30 people.

Why are so few people able to do so much? Because Stone has brought together a housing team made up of builders, architects, lenders, and land investors.

The team's quarterback is Stone Partner Emil Hanslin, a midwesterner (from St Louis) with a sure grasp of the staid north-of-Boston housing market.

Hanslin is the only Stone partner (there are four others) who doesn't sell houses. He's too busy tending to the firm's other activities.

He talks fast, walks fast, drives fast. And, most of all, he thinks fast—and along original lines.

Hanslin, now 39, joined the Stone

organization in 1945 while still on terminal leave from the Air Corps (he was a pilot). He soon saw the opportunities for a realty firm that would meet the needs of builders in the middle- and upper-price brackets.

"My ideas took hold," says Hanslin, "because they were based on Stone's strong sales foundation." The man who fashioned this foundation is President Robert J.W. Stone, the company's founder (in 1925) and still its top salesman.

Stone aims at a conservative, quality-conscious market

Its buyers are successful business and professional men. Whether long-time Boston area residents or newly transferred "corporation gypsies," they are second, third, and even fourth-time buyers who know what they want.

The vast majority want New England design—and they aren't fooled by the kind of gimmicks that pass for "traditional" in some areas. Says Hanslin:

"Even people who owned contemporary houses in other parts of the country seem to want New England style when they move here. I guess it's a desire to 'go native' or gain 'protective coloring'."

A small minority still want contemporary design. Says a lender (Archer Thompson, president of Melrose Savings Bank): "We finance contemporary houses on the same basis as traditional ones if Stone approves the design."

All of Stone's buyers want neighborhoods that seem established—even in new developments. They want winding streets, plenty of trees, and a variety of houses. Says Robert Stone: "Many of our prospects start out looking for an older house, but buy a new one after they've seen our developments."

Land control is the key to Stone's success

"Everything we do depends on complete control—from the time the land is bought to the time the last house in the

TYPICAL STONE DEVELOPMENT—in choice lakeside location—has variety of houses (no two are alike), curving streets, plenty of trees.



subdivision is built," says Hanslin.

Why is land control so important? Hanslin gives these reasons:

1. It assures the development of the land into attractive communities.
2. It reduces the risk of land speculation, thus attracts new outside capital to the housing industry.
3. It keeps the prices of lots from skyrocketing. Choice lots are always available when needed, so builders don't have to bid up prices.

"As a result," says Hanslin, "our primary job of selling houses becomes easier and less costly, and we can afford to broaden our services to builders."

Stone controls land by acting as a professional developer

It does everything most developers do, *except* invest its own money. The firm's partners—particularly Hanslin—are astute judges of land values and progressive land planners.

They locate land for development, work out zoning problems with local officials, and find investors who put up capital to buy and develop the land.

They manage each step in the development of a subdivision—the survey of the tract, the laying out of lots and roads, the construction of roads and other facilities. And they decide on the price bracket of houses in the subdivision.

They sell lots to builders. And they encourage builders to pioneer in a new subdivision by requiring the land owner to offer the first few lots at special low prices.

They approve the design of each house. They help builders and architects pick the right house for each lot. And they advise builders on how to site their houses.

They even select the name of each subdivision. Says Hanslin: "We are careful to pick names that suit the area

and appeal to our market." Examples: King James Grants, Ledgefield, Sugar Loaf Glen, Canterbury Hill, Kings Forest, Lord's Hill, Boswell Park, Apple Hill, Sherwood Forest.

Do investors balk at Stone's control of land development?

No—and for an obvious reason: they get a good return on their money.

Here are two examples:

1. An investor made a \$63,200 profit on an investment of \$104,800. He paid \$32,000 for raw land, \$3,000 for engineering, and \$69,800 for roads and other development work. He sold 42 lots for \$4,000 each.

2. An investor made \$134,000 on a \$181,000 investment. He paid \$65,000 for land, \$6,000 for engineering, and \$110,000 for development work. He sold 70 lots averaging \$4,500 each.

Stone charges investors nothing for helping them develop and sell their land. Explains Hanslin: "We do all this because it helps us sell more houses, and that's where we make our money."

Stone-developed subdivisions range from five to 250 lots

Most of them contain houses by several builders—which makes for more variety. But a few are one-builder tracts.

Some of Stone's land investors are builders and architects. But most of them are from outside the housing industry—farmers, local businessmen, and industrial leaders.

Says Stone Partner Dick Simmons: "We look for individuals or small syndicates with enough capital and credit to post performance bonds (required by municipalities to guarantee fulfillment of development plans) without tying up the cash needed for development work."

Stone also helps investors get loans through local banks. On the purchase

of raw land, Massachusetts law permits banks to lend 30% to 40% of their appraised value of the land. Loans are made at going interest rates for up to three years.

Says Melrose Savings' Archer Thompson: "We like to lend to Stone's developers because we want the mortgages on the houses that go up in these tracts. Stone's communities improve our whole area and this makes all our loans more valuable."

Hanslin is the land planner for Stone's subdivisions

"He's the best land planner in New England," says Builder Charles Wills. "He can get more lots out of a site than anyone else—and still make it better looking."

Here are three rules Hanslin follows:

1. Avoid areas where lower-priced houses have been built. "It doesn't make sense to put \$24,000 to \$50,000 houses near houses that sold for under \$20,000."

2. Save all the trees possible. "You see all those trees," Hanslin once remarked. "Every leaf on them is worth a dollar bill."

3. Fit each house to the land. "This is particularly important in rolling country. It cuts earthmoving costs and preserves the natural look of the land."

Nearly every house in Stone's tracts is architect-designed

And most of them—about 540 of the 600 houses completed this year—were designed by Claude Miquelle Assocs.

Of these, about 100 were new designs provided by Architect Miquelle and his four-man staff. The rest were built from existing designs available from Miquelle on a royalty basis.

Miquelle's work for Stone's builders accounts for about 60% of his dollar

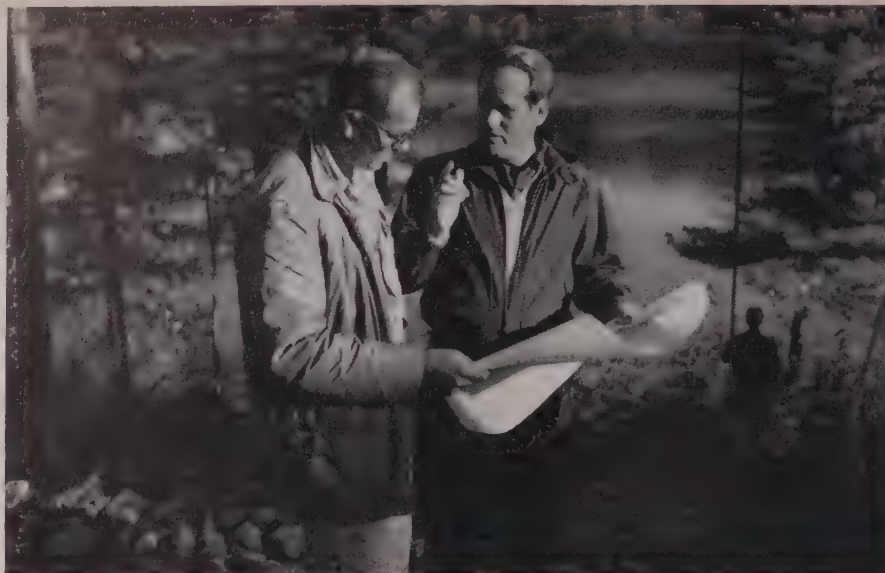
TYPICAL STONE STREETSCAPE has countryside appearance because contours are changed little and houses are designed to fit the sites.





REALTY PRESIDENT ROBERT STONE (right, with buyers) founded firm 34 years ago, is still its No. 1 salesman.

KEY REALTY PARTNER EMIL HANSLIN (right, with civil engineer) plans land and coordinates firm's activities.



Here is a housing team led by a realty firm



BUILDER BENGT ERIKSSON says: "The more builders Stone serves, the more service I seem to get."



BUILDER LUCIEN MOREL says: "The only trouble is that sometimes Stone pushes us too fast."



BUILDER CHARLES WILLS, says: "I know of no other realty firm that can match Stone."



BUILDER DICK HAMMER says: "I get together with Stone's men from 3 to 25 times a week."



REALTY PARTNER ED THOMPSON (right, discussing siting of house with Builder Dave Jordan) works with 20 builders.

ARCHITECT CLAUDE MIQUELLE (center) and his staff do most of their house designs for Stone's 62 builders.



BANKER WINSHIP BILLINGS of Melrose Savings (inspecting new house) says Stone encourages quality construction.

BANKER MALCOLM MACVICAR of Warren Institution for Savings (at new tract) says: "No Stone tract has ever failed."



volume. He and his staff also design commercial buildings and more than 50 houses a year for other builders.

Says Architect Miquelle: "I like working with Stone's builders. I learn a lot about their costs and construction methods. And with 80% of today's houses built by merchant builders, an architect must work with builders if he expects to have a hand in the design of very many houses."

Says Builder Dick Hammer (20 houses a year): "Miquelle's designs are highly acceptable to buyers. His plans are easy to build from. And he knows how to keep costs down."

Says Builder Lucien Morel (12 houses a year): "This is custom service. If a buyer doesn't want one of our existing designs, he can sit down with Miquelle and work one out."

Says Lender Archibald Dresser of Boston's Warren Institution for Savings: "We know several builders whose designs have improved since they became Stone clients. As a result, they're getting better loans and selling faster."

Architect-builder teamwork is encouraged by flexible fees

Miquelle takes an industrial designer's point of view in approaching the business of designing houses for builders. He charges for his designs under three formulas that are based on the amount of services performed:

Formula 1: When a builder wants one of about 400 existing plans previously designed by Miquelle for one of Stone's group, the architect charges a \$45 royalty. Homebuyers can see these older plans at each Stone office.

Formula 2: When a buyer wants an existing plan with minor changes, the architect charges \$14 an hour for time spent consulting with the buyer and drawing new details.

Formula 3: When a buyer wants a new plan, Miquelle charges 1.2% of the sales price of the house, including land cost. But the builder pays nothing. The buyer pays 1% (the price of the house is increased to include the fee). And Stone pays 0.2% (of which the salesman pays half).

"This is a profitable business for us," says Miquelle, "because we have set ourselves up to handle it and have such a big backlog of experience to work from. For Stone builders it means lower-than-average design costs made possible by the volume of design involved."

Miquelle designs builder houses for a variety of sloping sites

Houses that fit hillsides are a requirement of many Stone builders because most of the firm's subdivisions are in rolling country.

For lots that slope up steeply from the street, Miquelle designs "banking

houses" (early Boston banks were built into hills). The lower level nestles into the ground at the rear; the upper level is open at both front and rear.

For lots that slope down steeply from the street, Miquelle designs "reverse banking houses." The lower level nestles into the ground in front. The entrance is on the upper level.

For lots that slope down gently from the street, Miquelle designs "halfway houses," the most popular houses sold by Stone. Their lower levels are half out of the ground and their entries are on a split level. These houses are also designed so that builders can get a variety of plans with few structural changes (see photos and details, pp 146-149).

Stone works with 25 banks to get builders the best terms

"We shop for mortgage money the way women shop for groceries," says Partner Dick McHugh. "We see so many bankers we can always find the money our builders or buyers need."

The banks Stone deals with range in deposits from \$8 million to over \$100 million. Some make only conventional loans locally, some hold FHA mortgages as far away as California.

Says McHugh: "Ninety per cent of all the banks' mortgages are originated through brokers like us, not with the homebuyer. We work with banks on a quid pro quo basis. Sometimes a bank wants mortgages, sometimes not. We feed them loans when they want loans. In return, they gear their lending to suit us."

There are no suppliers on the Stone housing team

Each builder picks his own suppliers and has the final say on what materials and equipment to put in his houses.

"This stimulates competition among suppliers," says Hanslin. "We limit our influence to stressing that the builders use quality products. And when one has success with a particular feature like a luminous kitchen ceiling or an extra heavy roofing, we spread the word among our builders. They have to meet each others' competition."

Hanslin is deeply concerned with the problem of "time lag between production of new products and their availability in the Boston market." He is trying to speed introduction and use of new and better products to make the selling job easier.

Stone's sales set-up gives its salesmen plenty of freedom

They are free to sell houses for any of the company's 62 builder clients.

They are free to sell in any of the company's 39 subdivisions.

They are free to sell new and old houses (their commission on both new

and old houses is the same).

And they are free to take a prospect from an advertised house to any other house—new or old.

"This freedom is good for everybody concerned—the salesman, the builder, and the buyer," says Robert Stone.

"It's good for the salesman because it helps him fit houses to buyers' needs and thus make more sales.

"It's good for the builder because it gives him the benefits of every salesman's experience and knowledge. He gets a broad picture of our area, finds out what's selling and what isn't, and picks up tips on how other builders have increased sales.

"It's good for the buyer because it makes our builders more competitive and thus keeps prices in line. Once in a while a builder takes a higher-than-normal markup — but not often. We can't afford to waste much effort on a builder who prices himself out of the market."

Stone's salesmen earn from \$8,000 to \$23,000 a year

On any house—new or old—they receive 35% of the firm's 5% commission, plus 10% if they originated the listing. At the \$15,000 earnings level, commissions go up to 40%.

Stone's partners work steadily to keep salesmen on their toes. All salesmen are required to take courses at Harvard. And all are required to attend weekly strategy meetings. Sessions, held every Wednesday morning, are followed by a bus tour of the company's area "to see what's happened during the week."

Any man who is even a second late for a weekly meeting is fined \$5. If he fails to show up—no matter what the reason—he pays a \$15 fine.

The attendance record? "Not bad," says Robert Stone with a smile.

A big trade-in program helps Stone sell more new houses

This year one-third of the firm's 600 new-house buyers traded up from old houses.

Stone guarantees the old-house owner a price of 7% below the value as appraised by one of the company's partners and one of its salesmen. Until his new house is ready, the owner is free to sell the old house through any real estate firm.

In 95% of the cases, Stone sells the old house before the new one is built. Sometimes—if an old house can be remodeled and sold for a profit—Stone takes title to it. And sometimes the realty firm unloads an old house by reducing the price. When it does this, Stone takes a cut in its commissions, and the new-house salesman shares the loss in profit.

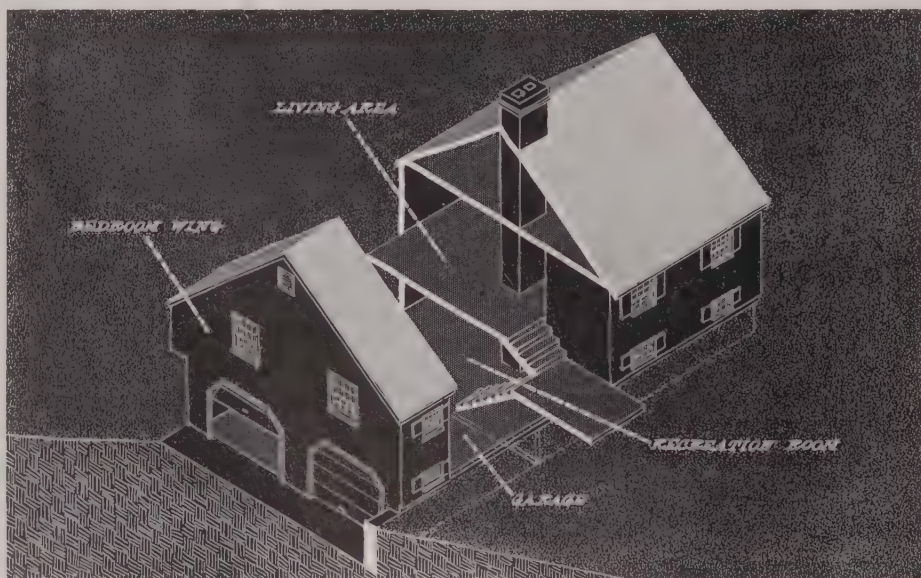
"But," says Emil Hanslin, "we almost never lose more than part of the commissions on a trade-in deal."



WIDE VARIETY OF HOUSES can be designed around basic plan units (see facing page) in system developed by Architect Claude Miquelle

for 62 north-of-Boston builders. All the houses—like the four shown here—are “halfway houses” with split-level entries (see box below).

To get this variety for a realty firm’s clients,



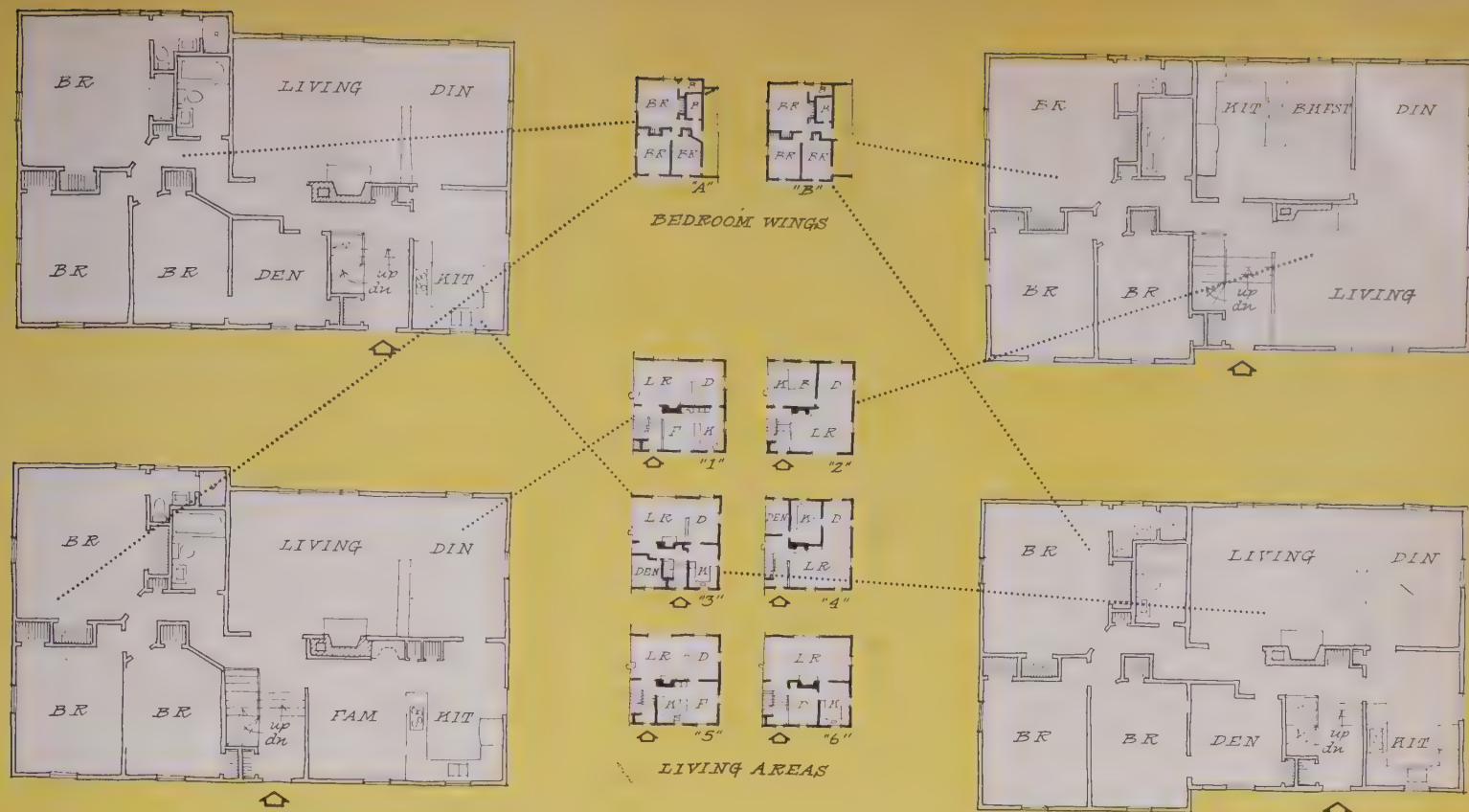
All this variety in plan and design is based on a “halfway house”

“Halfway houses” get their name from the fact that their basements are raised halfway out of the ground. They all have split-level entries (see examples in photos, left).

Their advantages: 1) they have daylight basements with a large recreation room and space for a fourth bedroom and third bath (both optional); 2) they reduce earth-moving and foundation costs, letting builders offer more house for the money; 3) they fit sites that slope down gently from the street in an area where few lots are flat.



Photos: Durland



BASIC PLAN UNITS—two bedroom wings and six living areas—can be combined into 12 different plans, and each plan works with two differ-

ent basements. In the four plans above—for houses shown on the facing page—both bedroom wings and four of the six living areas are used.

the architect juggles these basic plan units

Twenty-four different houses can be produced with different combinations of the plan components shown above.

The system was developed by Architect Claude Miquelle for the 62 builders whose north-of-Boston houses are sold by the Robert Stone Co.

The system lets Miquelle assemble a plan from a choice of these basic components:

1. *Two bedroom wings.* One cantilevers 2' forward over the basement, the other 2' backward.

2. *Six living areas.* Some have front living rooms; others have rear living rooms. All are distinctly different from each other.

3. *Two basements.* Both are the same size (28'x49'), but one has a front-entry garage and the other a side-entry garage. Either of the bedroom wings can be combined with any

one of the living areas. And any of 12 combinations of these units can be set on either basement.

Actually, Miquelle can design, not 24, but at least 40 different houses with the interchangeable units. Reason: he also provides three basic elevations (see overleaf) that are more than just changes in materials and roof lines. One of these elevations works with four living areas, one with the fifth, and one with the sixth.

This system produces some of the most popular houses designed by Miquelle (he also designs houses for other builders). Builders like the system because:

1. It lets them give each buyer a lot of choices without getting into structural changes that lead to high costs.

2. It lets them work ahead on foundations and basements and still give buyers a wide choice in the finished house.



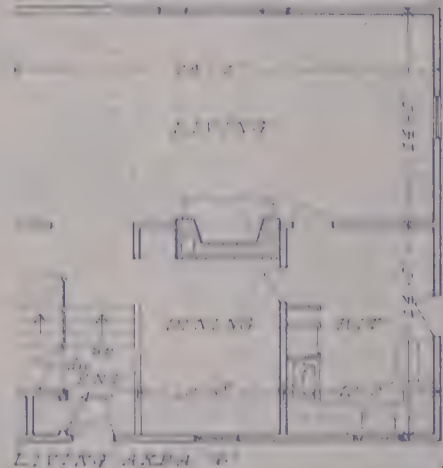
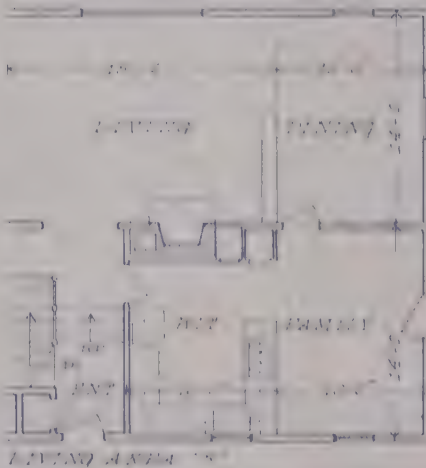
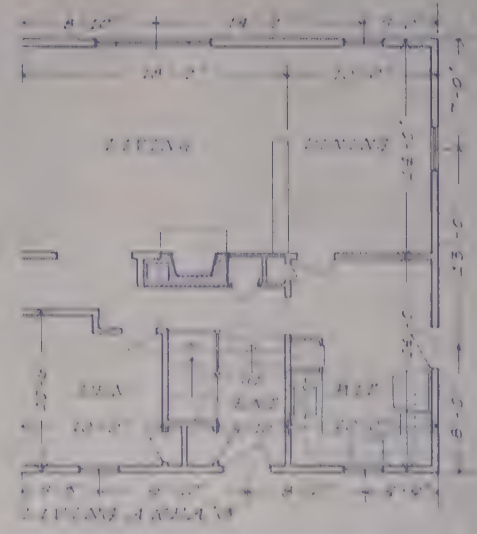
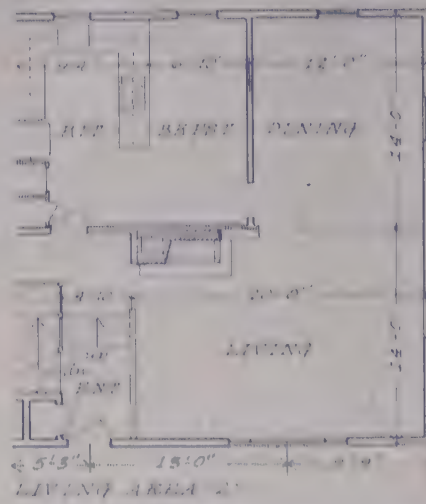
FAMILY ROOM is open to kitchen, at left, in two of the basic living-area plans in Architect Miquelle's flexible planning system.



RECREATION ROOM is at rear of both basements used with Miquelle's system. "Halfway house" design (see facing page) permits big windows.

For plan units and selected details, turn the page

THESE ARE THE BASIC PLAN UNITS IN ARCHITECT MIQUELLE'S FLEXIBLE SYSTEM



ANY ONE OF THESE 6 LIVING AREAS

CAN BE COMBINED

WITH

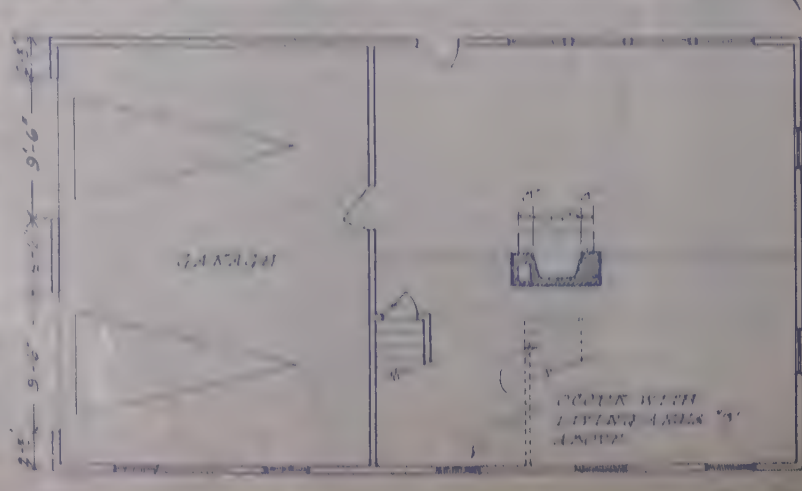
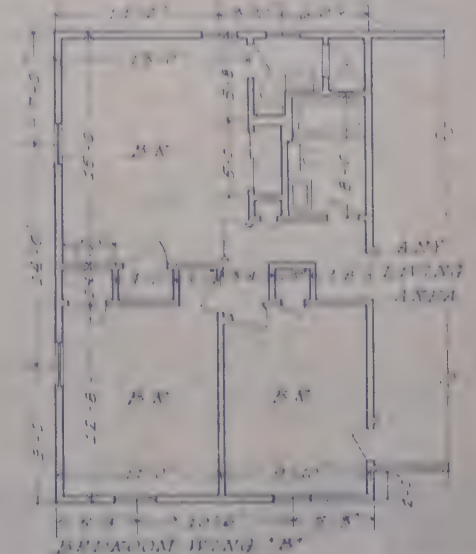
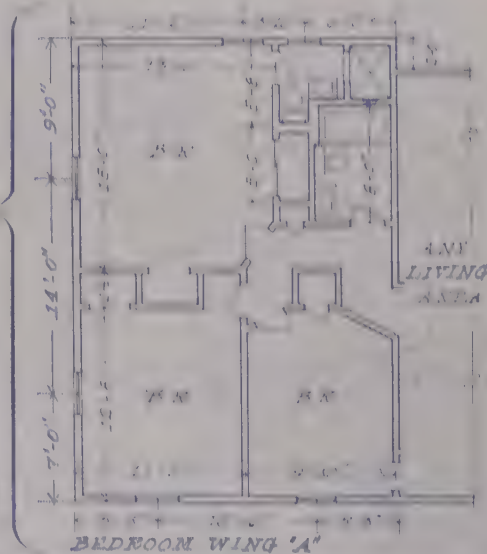
EITHER OF THESE 2 BEDROOM WINGS

AND ANY OF THE

12 RESULTING COMBINATIONS

CAN BE SET ON

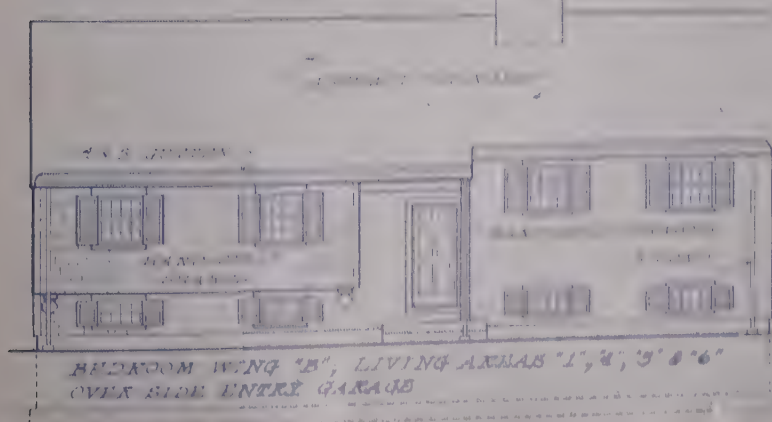
EITHER OF THESE 2 BASEMENTS



... AND HERE ARE THE BASIC ELEVATIONS



SIDE ELEVATIONS (SHOWING ALL 3 POSSIBLE VARIATIONS)



3 FRONT ELEVATIONS

TYPICAL SECTION
(SHOWING SPLIT-LEVEL ENTRY)

SELECTED DETAIL:
FROM HOUSES DESTROYED BY
FLAMES SPREADING FROM THE



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NEW WAYS TO BUILD BETTER

A monthly report on home building ideas, products, and techniques

Starting here

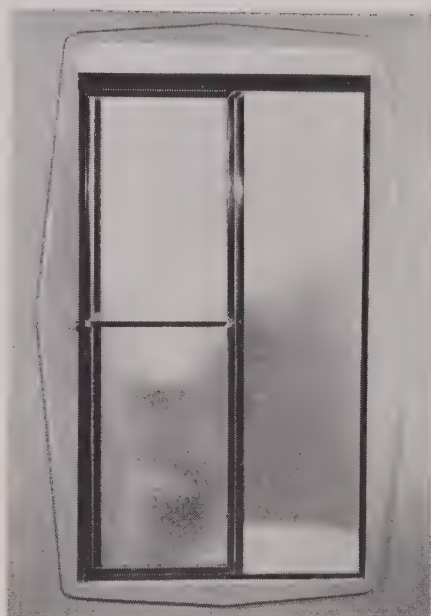
New products



New vitreous glaze called Fiesta is feature of Eljer's 1960 line. The dappled gray on white finish will be found on Estate and Emblem toilets, Blair, Cynthia, and Alicia lavatories. All Eljer bathtubs will come in a complementary gray enamel. Designs are by Dave Chapman.

Eljer, Pittsburgh.

For details, check No. 1 on coupon, p 224



Plastic shower stall is made of fiberglass-reinforced polyester. Shower basin is 33"x60" oval to fit usual 5' tub alcove. Stall is one piece—bottom, back, ends, ceiling, and surround. Door is sliding glass. Plumbing can be pre-assembled, installed with stall. Price: \$175.

Design-Tex, Inc, Dallas.

For details, check No. 2 on coupon, p 224



Electric humidifier supplies moisture at constant low, medium, or high rate. Immersion heater works in ceramic water pan. Teflon coating and nylon valve resist wear and corrosion.

Viking Air Products, Cleveland.

For details, check No. 3 on coupon, p 224



Outdoor meter box eliminates call backs from meter readers. Cover is plastic and aluminum to avoid corrosion; window is Plexiglas. Fiberglass insulation cuts heat loss.

Handley-Brown Co, Jackson, Mich.

For details, check No. 4 on coupon, p 224

And on the following pages

Electric heat

Electric heat round tables New NEMA standard for direct heat New FHA insulation standard for direct heat Progress report on proposed all-weather comfort standard What you need to know about controls for electric heat.

see page 155

Technology

Quarter-inch tubing for hot-water heating . . . Two-layer drywall system.

see page 197

What the leaders are doing

Make entry courts part of the garden . . . Small shop helps hold costs down.

see page 201

Publications

Daylight prediction method . . . Panel system of house components.

see page 202

More New products

New panel system of lightweight concrete . . . New sinks for all purposes.

see page 209

MORE USABLE SPACE—MORE SALES APPEAL with both front and backwall “OVERHEAD DOOR”



"Convertible-Garage-Room" sells home buyers with extra living space they want and need

It's new—and it offers the extra living space home buyers want. It's the new "Convertible-Garage-Room"—a garage that converts in seconds to livable space. All it takes is a second "OVERHEAD DOOR" to replace the blank backwall and open the garage to a light, inviting area for living.

Recent surveys, including one by United States Interviewing Corporation, show 70% of home buyers want and need the extra space this room can offer when temporarily

converted to a sheltered patio, a hobby center or a play pavilion for the children.

Surveys also reveal 56% will pay \$400 and more for this extra space. Yet, you can offer it for virtually *no extra cost*. Materials and labor saved in the backwall make up most of the cost of the second door. The cost is also covered by increased evaluations. Builders all over the country report evaluations by FHA and other financing agencies as high as 11% over a conventional garage.



HERE'S HOW ONE BUILDER COMPARES MATERIAL and LABOR SAVINGS...savings that can be subtracted from the cost of the second "OVERHEAD DOOR"

FRAME		BRICK	
Each window (approx.)	\$24	Windows (same as frame)	\$24
Service door, header, framing, hardware and labor	28	Door (same as frame)	28
Amount saved in siding, studs, sheathing and labor (minus cost of header)	26	16 x 7 area in brick minus header	85
Block footer and labor	9	Block, footer and plaster	28
Any inside finish	19		
GROSS SAVING \$106		GROSS SAVING \$165	

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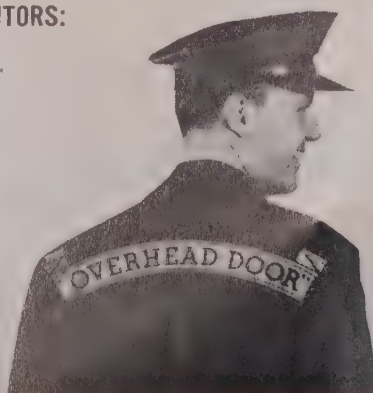
Cortland, N.Y.; Hillside, N.J.;
Lewistown, Pa.; Nashua, N.H.

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Typical home in Barrington Park, equipped with B&G Hydro-Flo Heating.

The Stuart Construction Company, builder of quality homes in Chicago suburbs, has discovered that B&G Hydro-Flo Heating is a sales clincher...wins the approval of critical home buyers because it offers visible extra value.

No other home equipment can offer so much immediate comfort or so many possibilities for more gracious living in the future. The B&G Hydro-Flo System offers the best in radiant, controlled heating, low operating cost and long-lived equipment.

It's *cleaner* heat—doesn't soil walls and drapes. It's *quiet* heat—no fan hum. If desired, the same boiler that heats the house can be equipped to furnish year 'round hot faucet water. Summer cooling and snow melting equipment can be included when building or later. And the B&G Hydro-Flo System can be easily zoned—a particularly important advantage in heating split-level or widespread homes.

Wherever builders have installed B&G Hydro-Flo Heating, *business is good!*

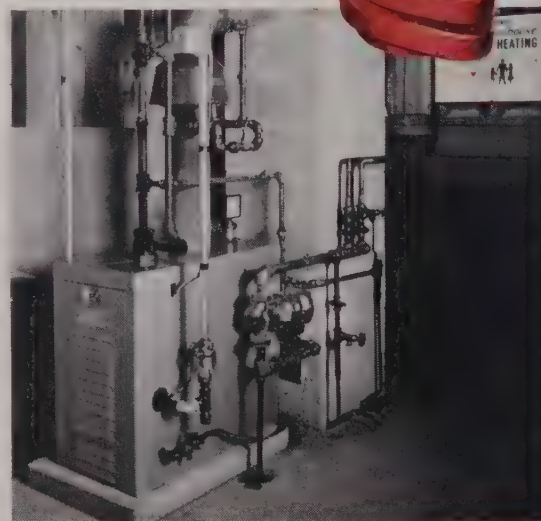
"THIS FEATURE APPEALS TO VALUE-CONSCIOUS HOME BUYERS"

says builder of top quality homes



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A silent electric circulator—the heart of the B&G Hydro-Flo System.



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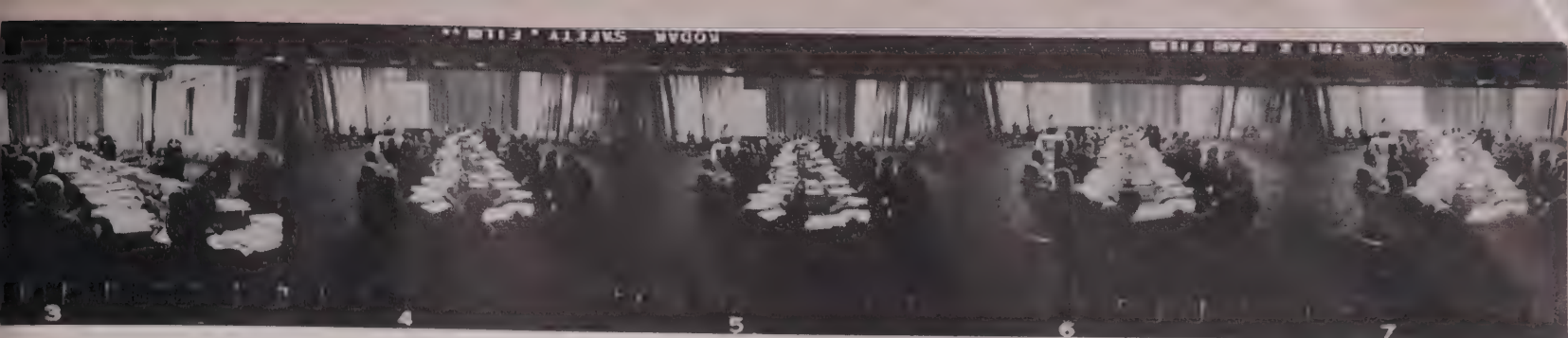
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Hydro-Flo® SYSTEM

BELL & GOSSETT C O M P A N Y

Dept. FZ-10, Morton Grove, Illinois

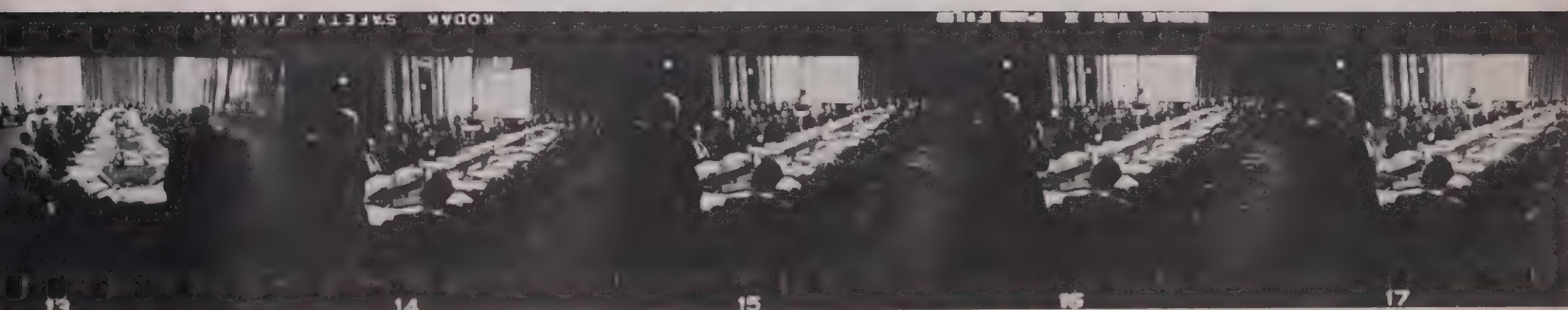
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Electric



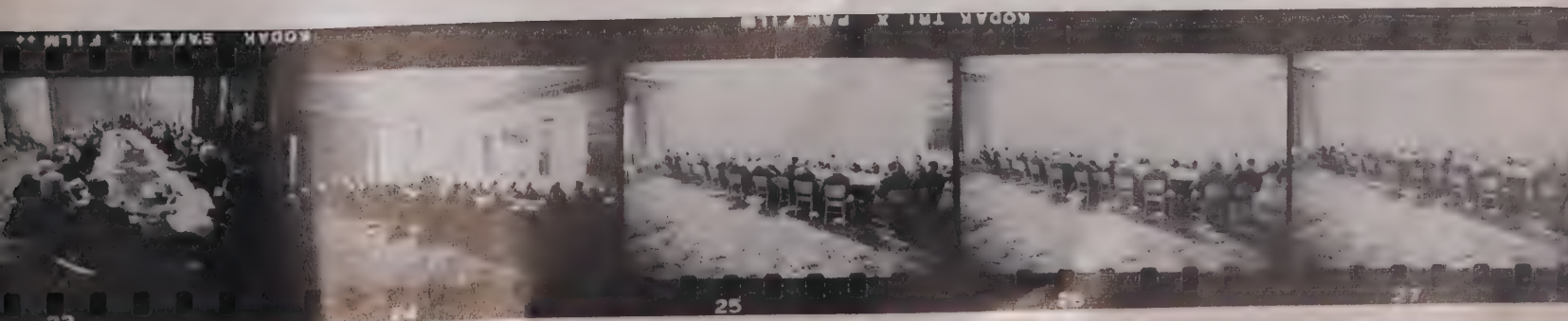
heat



round



tables...



The round table panel:

FOR THE FEDERAL HOUSING ADMINISTRATION

Julian Zimmerman, *commissioner*

W. Beverley Mason, *assistant commissioner*

FOR THE MANUFACTURERS

Joseph Miller, *managing director*
National Electrical Manufacturers Assn

S. Giordano, *president*
Fedders Corp

C. K. Rieger, *vice president*
General Electric Co
chairman, Major Appliance Div, NEMA

W. R. Wilkinson, *vice president*

Francis Dutcher, *vice president*
Johns-Manville Corp

James Ashley, *vice president*
Libbey-Owens-Ford Glass Co
past president, Producers Council

E. J. Dajgen, *vice president*
Tyler S. Rogers, *technical consultant*
Owens-Corning Fiberglas Corp

F. T. Hughes, *vice president*
Pittsburgh Plate Glass Co

R. N. Campbell, *vice president*
Westinghouse Electric Corp

C. J. Witting, *vice president*
Westinghouse Electric Corp
vice president, NEMA

C. F. Kreiser, *general sales manager*
Edwin L. Wiegand Co
chairman, Electric House Heating, NEMA

Marland S. Wolf, *vice president*
Wood Conversion Co

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Philip Sporn, *president*
American Electric Power Co

Paul Emler, *vice president*
American Electric Power Co

Willis Gale, *chairman*
Commonwealth Edison Co

Thomas G. Ayers, *vice president*
Commonwealth Edison Co

Edward George, *vice president*
Detroit Edison Co
chairman, Commercial Division, EEI

Edward Vennard, *executive vice president*
Edison Electric Institute

Gordon Evans, *chairman*
Kansas Gas & Electric Co

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Southern California Edison Co

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Metropolitan Life Insurance Co

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Mutual Benefit Life Insurance Co

R. Manning Brown, *vice president*
New York Life Insurance Co
chairman, Mortgage Lending Policy Committee
Life Insurance Assn

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OF MUTUAL SAVINGS BANKS

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William Lyon, *past president*

Grover Ensley, *executive vice president*

FOR THE US SAVINGS & LOAN LEAGUE

W. O. DuVall, *president*

Henry Bubbs, *past president*

Howard Edgerton, *past president*

FOR THE APPRAISERS

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American Institute of Real Estate Appraisers

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Engineering Sales Co Inc
Fort Wayne

MODERATOR

P. I. Prentice, *editor & publisher*
House & Home

What's new in electric heat?

Electric heat has made notable progress in the nine months since HOUSE & HOME's last report (Mar).

Most of this progress stems from two industry round tables:

1. A round table last spring sponsored by the National Electrical Manufacturers Association.
2. A round table this fall sponsored by one of the big electric utilities.

The first round table gave the electric utilities and the electric heat manufacturers a chance to make their case for full mortgage credit to FHA and the principal mortgage lenders. It also revealed to them their No. 1 problem—the lack of good enough standards for installing direct heat and providing adequate insulation to make electric heat economical.

The second round table developed a united front to get quick action on the quality standards.

Largely as a result of these conferences:

1. FHA has modified its appraisal and income requirements for homes heated by electricity (see p 159).
2. The biggest mortgage lenders have gone on record as willing to finance homes heated with electricity on almost the same terms as homes heated by other methods (see p 160).
3. The manufacturers of direct heating equipment have established adequate standards through NEMA to protect homebuyers from inferior installations (see p 186).
4. All the leading manufacturers of blanket insulation got together to develop a performance standard for insulating houses designed for either air conditioning or electric heat. This could serve for other types of insulation too (see p 182).
5. FHA will bring its insulation requirements for electrically-heated and air-conditioned homes in line with the new standard.



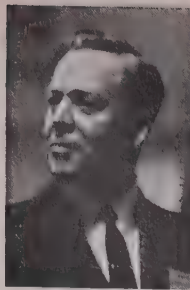
SPORN
Electric heat is not too expensive.



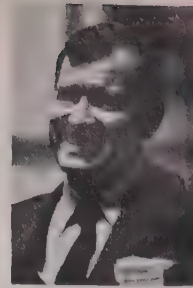
WORTHMAN
We put maximum insulation in all of our homes.



DETGEN
Regardless of fuels, everybody will have to insulate.



WITTING
A tremendous educational job must be done.



RIEGER
The lenders are the only roadblock.

Here is the case for electric heat presented by makers and utilities

These quotations are excerpted from the 268-page transcript of the two round tables.

SPORN: Here are six major advantages for electric heat:

1. Comfort. You can put electricity anywhere you want and, therefore, you can have electric heat on or off wherever and whenever you want it.
2. Safety. It just isn't possible to have a burst pipe or an open joint. There is no combustion in an electric home.
3. It works well with air conditioning.
4. Its first cost is probably less.
5. The operating cost can be very little more if the house is properly insulated. The average cost of electric heat in 14,000 homes served by American Electric Power System is only \$195 a year.
6. The comparative cost of electric heat is coming down. Soon electric heat may be cheaper as well as better.

Today only about 500,000 homes are heated by electricity—35,000 with heat pumps, 465,000 with direct (resistance heat). But by 1978 we believe it will be possible to sell electric heat into 18,000 homes, or one house out of every four. This will mean selling electric heat into 40% of the 30,000,000 new homes that will be built in the next two decades. It will also mean selling electric heat as a replacement item into 6,000,000 existing homes.

The future is with electric heat because eventually gas, oil, and even coal will all be in more or less difficulty meeting the fabulous increase in America's demands for energy. Atomic fuel, the great new and more abundant energy source of the future, can be bought into use only electrically, so only electricity can face tomorrow saying confidently: "Let the demand come; we can supply it."

Today, the only people standing in the way of electric heat are the mortgage lenders—the people who put up the money and really own the home. If they would examine the future availability of the various sources of domestic heat, I believe they would help us promote the use of electricity for heating, instead of penalizing it.

WORTHMAN: We have been selling electrically-heated homes for four years. If the builder does a good insulation job and a good installing job, the homebuyer will be really happy. None of our homebuyers is dissatisfied, and we have never lost a sale by offering electric heat. We tell prospects it will cost at least \$50 a year more, but the cost is secondary: anyone who can afford cigarettes can afford the comfort and convenience of electric heat.

WITTING: It is inevitable that electric heat will become the least expensive way to heat a home.

CAMPBELL: Faulty installation is easy to correct in an electric-heat house.

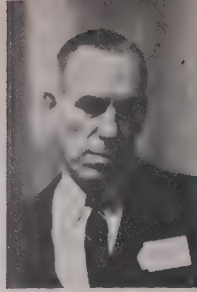
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GIORDANO
Electric heat is a natural for air conditioning.



KREISER
Electric heat is not too expensive.



CAMPBELL
Electric heat isn't a future; it is here.



WILKINSON
The insulation industry is more eager to sell electric heat than the utilities.



HUGHES
Double-glazing is essential to full insulation.

KREISER: The freedom from maintenance problems offered by direct heat is important to the homeowner.

RIEGER: Direct electric heat is the most trouble-free heat of all, and the most permanent you can ever install. Usually it has no moving parts, so it has nothing to wear out. The heating elements should outlast the house.

GIORDANO: The lenders will find a home air conditioned and heated with electricity more salable and, therefore, a more secure investment.

AYERS: Electric heat has proven very good for apartments; 74% of our electric heat customers in Chicago live in multi-family units.

The apartment-house builder saves a substantial amount on the first cost of the building. He saves on chimneys, on multiple-flues, on ducts and boiler rooms, fuel storage facilities and piping. On one project the builder saved \$2,300 per unit. He also saves between 33% and 50% on janitor service; he saves on maintenance, for direct heat is almost maintenance free; and he rents what would otherwise be the boiler room for \$1,260 a year.

MCDANIELS: Electric heat does not cost much more. We can state unqualifiedly that variations in individual consumption account for considerably more difference than the variation between electric heat and some other method.

AYERS: First we saw the electric light replace the lamp; then we saw the refrigerator replace the icebox; we saw the washing machine replace the washboard; we are seeing the dryer replace the clothesline. The remarkable thing about each of these developments is that the electric way has not been cheaper—it has been more expensive, but it's worth it.

MILLER: The public will buy electric heat because it is better and soon it will be cheaper in both operation cost and first cost.

RIEGER: The only roadblock is the attitude of the lenders.

Electric heat is big business

TURNER:

The market potential is enormous. By 1980 the additional electric load for electric heating alone could be 350 billion kwh, or as much as the total sales of the electric utility industry to all ultimate consumers as late as 1952. The investment in facilities needed to supply this addition would be of the order of \$32 billion.

SKINNER:

The utility companies must do something to get the winter load to fill up the valley that used to be their peak. We have room for 25,000 electrically-heated home sys-

tems without adding one kilowatt generating power. Companies further to the south of us have even more latitude than that.

KREISER:

Electric heating may be the only way to preserve balanced load factors in the face of the fantastic growth of summer peaks due to cooling.

VENNARD:

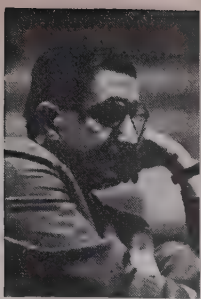
Because of air conditioning, more than half the country has a summer peak in electric demand.

HIENTON:

The only way the utilities can reach saturation is electric heating.

RIEGER:

At General Electric we have a tremendous stake in the future of air conditioning, but if we stick to air conditioning alone we would be very shortsighted. We are equally concerned with the overall heating system. Electric heating is fundamental to our future if we are to protect our investment in the major appliance business.



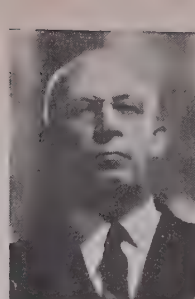
ZIMMERMAN
I have learned even more than I hoped to learn at this round table.



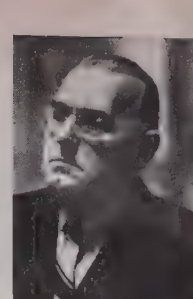
MASON
FHA is trying to make it possible.



CARPENTER
You must convince us by education that this is a good product.



LYON
The ignorance is colossal.



VIESER
We want to encourage better building.

In reply, Commissioner Zimmerman spelled out a new FHA policy on electric heating

ZIMMERMAN: Our guiding purpose at FHA is to see that homebuyers get good homes at a price they can afford to pay.

We believe that what is good for the homebuyer is good for the housing industry too. And we believe that the more competition develops between the manufacturers who supply different types of product and equipment for the housing industry, the better.

So FHA will put no improper obstacles in the path of electric heat.

I am satisfied that electric heat has progressed to a point where it is unreasonable not to allow full credit for the actual cost of electric heat in a replacement cost estimate. I cannot imagine any reason for knocking down the appraised value just because the house has electric heat, provided the system is properly designed. I will try to see that this policy is followed uniformly by all our officers.

As soon as the manufacturers and the electric utilities are satisfied that you have solved all your problems connected with electric heat I am sure you will have no trouble with FHA. But as long as you have problems of costs and installation and standards, we at FHA are bound to have problems along with you.

Specifically:

As long as the operating cost of electric heat is more than gas or oil or coal, FHA will have to question electric heat for the low-income market. But I can assure you that FHA will not be unreasonable in its requirements. I want FHA to be practical and flexible in its handling of small cost differentials.

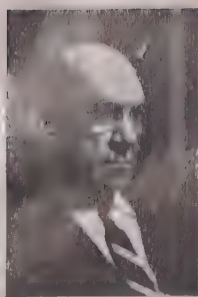
Except for the low-income market, I do not believe it is necessary for FHA to assume the role of guardian and financial advisor to our mortgagors. I believe we must allow quite a bit of leeway and use a lot of judgment.

If a family has income enough to afford a house costing \$15,000 or more, that family has income enough so that FHA need not worry too much about a small differential in the annual operating cost of a facility. The higher the income, the less significant are these small cost differentials to our mortgage credit examiner.

MASON: FHA is trying to make it possible to use this very fine medium for heating homes in the most efficient possible way. We are trying to be flexible and move along rapidly with the trend towards electric heat in a practical way, developing right answers as we go along.

The Bureau of Standards' formula for estimating the electrical consumption for electric heat has been questioned by several of our offices. They tell us that actual power consumption is sometimes 75% less than our formula would estimate. We have put this question up to the Building Research Advisory Board.

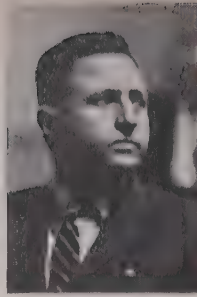
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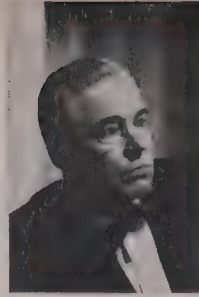
DuVALL
The utilities have done a good job on rates.



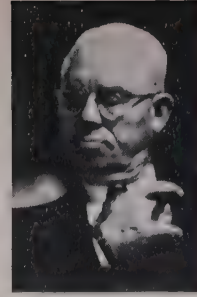
EDGERTON
Where I live it is no problem.



BROWN
You must educate the other building professionals too.



BOOTH
We require no more income.



GOLDSTEIN
For apartments electric heat is preferable.

All the big lenders at the round table said they would not penalize electric heat

BROWN: I assure you we have no prejudices against electric heating. My company has made loans on homes that are so heated, and our experience has been very satisfactory.

DUVALL: I don't think you will have any great resistance among the savings and loan men on financing houses with electric heat. I do feel you have certain points to work on—that the dealers must be better educated about the quality of what they are selling, and the installation should be better. I think the electrical industry is to be commended for holding rates as low as they have, and certainly the trend in the future appears to be toward electric heat. From the conventional lending standpoint, electrical heat will not be penalized in my judgment.

BUBB: I don't believe many savings and loans will penalize anybody for putting in electric heat. I think it is a coming thing.

EDGERTON: Out in Southern California there are no longer any bottlenecks.

GOLDSTEIN: For the small office or the multi-family dwelling unit, I don't think there is any question about it—electric heat is preferable, even if it costs a bit more to operate. But for houses designed to sell to families with incomes under \$6,000, I believe appraisers will have to penalize electric heat as long as it costs more. If, for example, electric heat costs \$50 a year more, I would like a low-priced house to be penalized in the market by \$500.

Around the \$15,000-\$17,000 price range there ceases to be any reason for penalizing electric heat for its small added cost. So I think the electric-heat manufacturers would be much smarter if they enter the market from the top and sell electric heat as something good than if they try to get into the market from the bottom and try to sell electric heat as something cheap.

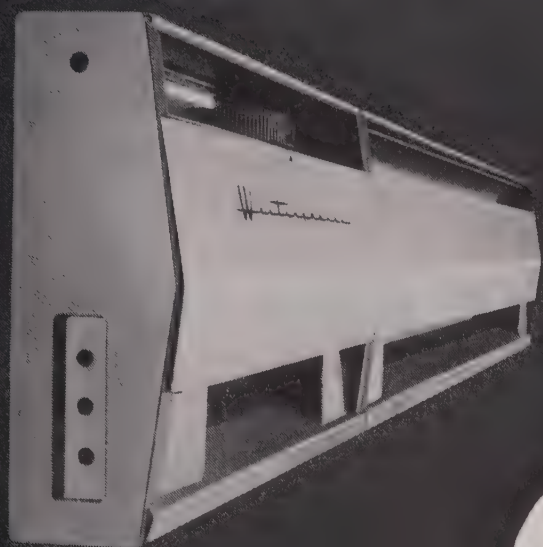
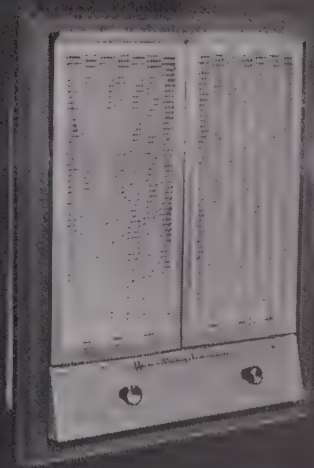
CARPENTER: I do not believe the lenders will provide any sort of road block to the progress of electric heat.

BOOTH: If the public wants electric heat we are going to lend the public the money to pay for it.

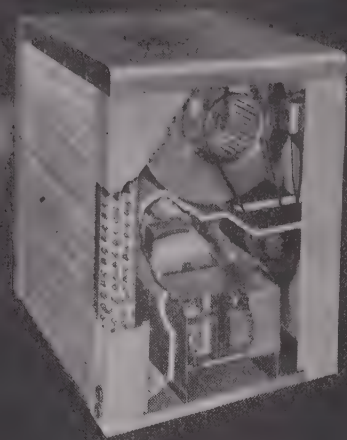
We lend money for houses with electric heat on both FHA and conventional mortgages. We give full credit for the cost of the electric heat installation, and we require no higher income to qualify to buy an electrically heated home.

LYON: If this is the way houses are to be heated in the future, we would like to see that electric heat is launched right.

continued on p 164



**WESTINGHOUSE
ELECTRIC HEATING**



**WESTINGHOUSE
HEAT PUMPS**

PLUG INTO

TOTAL ELECTRIC HOME SALES

Westinghouse Electric Heating and Heat Pumps let you put the full impact of the dynamic new \$3 million TOTAL ELECTRIC HOME promotion behind your new homes. Your homes will sell easier, be snapped up faster . . . and at full value. Where low initial cost is a factor, Westinghouse Electric Heating offers luxurious comfort in Baseboard, Wall, Floor and Bathroom types. For the ultimate in year-round comfort . . . with electricity . . . the Westinghouse Remote or Self-Contained Heat Pumps bring exciting new appeals to your customers. For either tract or custom homes, Westinghouse offers a complete line of electric heating and cooling products.

It's not really a TOTAL ELECTRIC HOME without Westinghouse Electric Heating or Heat Pumps . . . give your

homes these sales-stimulating benefits this year. And see the all-new Westinghouse Electric Baseboard Heating at the Westinghouse Booth . . . NAHB Show . . . January 17-21 . . . Chicago.

J-85028

AIR CONDITIONING DIVISION
WESTINGHOUSE ELECTRIC CORPORATION
STAUNTON, VIRGINIA

YOU CAN BE SURE...IF IT'S

Westinghouse



WATCH "WESTINGHOUSE LUCILLE BALL-DESI ARNAZ SHOWS" CBS TV FRIDAYS



"We found Andersen the only window

Stopping heat loss through and around windows is an important job. It's even more important in the new, electrically heated homes.

Builder Sam Slaughter, President of NR Construction Company, New Richmond, Wisconsin, has found his answer. He uses weathertight Andersen Windows. And since Mr. Slaughter's firm builds 100 to 150 homes a year in the \$13,000 to \$20,000 bracket, including models that are electrically heated, his experience is well worth listening to.

"The insulation around windows is a very important factor in the electrically heated home. In order to keep costs down and

provide maximum insulation, we found the Andersen Window the only one that could do the job."

Andersen Window design—particularly in the new Strutwall* units—permits the tightest possible joining of window and wall. On-the-site problems of insulating around the windows are eliminated. Wood sash and frames, plus insulating glass or storm panels, contribute to insulation efficiency. And Andersen Strutwalls are 6 times as weathertight as commercial standards require.

Whether you are building custom homes or budget projects, look into the economies you can effect with Andersen Windows. You'll find seven basic styles in an almost limitless range of sizes.

"The initial cost for Andersen Windows is slightly higher," reports Mr. Slaughter, "but the ultimate savings from quick installation and superior insulation more than pay for this in a short period of time."

PICTURE WINDOW BEAUTY. VENTILATION, TOO. Andersen Strutwall windows provide both in this Slaughter-built living room. Wood sash and frame blend with the warmth and charm of paneling.





for electrically heated homes''

— says Sam Slaughter, progressive Wisconsin builder of Lu-Re-Co homes

Fine wood windows that blend well with every style of architecture; provide more customer comfort and satisfaction; increase

the value and beauty of the homes you build. See your lumber or millwork dealer. Or write us direct.

Andersen Windowalls*

TRADEMARKS OF ANDERSEN CORPORATION

ANDERSEN CORPORATION • BAYPORT, MINNESOTA



SAVE LABOR. SPEED INSTALLATION TIME. Andersen Strutwalls in Lu-Re-Co panels become integral part of wall. Require only simple cutting of jack studs and header. Unit slips into place. No extra insulation needed.





WOLF

We need uniform standards for construction and insulation.



SKINNER

People will always buy comfort—even if they have to pay more to get it.



GEORGE

Homebuyers are far ahead of us in their interest in electric heat.



McDANIEL

The builder is responsible.



AYERS

To put electric heat across will require a big educational job on the trade.

The better the insulation the less the cost of heating with electricity

SKINNER: The fuel is more expensive, so we must pay more attention to insulation. It is almost criminal to see the inadequate consideration given to insulation and the vapor barrier. We're trying our best to develop the technology and understanding of how to insulate a home so as to get the most out of it in the form of comfort. Once you do it, you get results that are unbelievable.

GEORGE: We are interested in saving as much heat for our customers as possible. We know that good insulation will save a customer \$50 to \$100 a year.

RIEGER: We are tired of customer dissatisfaction that is really the fault of inadequate insulation.

DUTCHER: The coming of age of electric heat has done more to improve insulation than any other one thing that has happened. It has dramatized the advantages that accrue to the homeowners, and consequently to the lenders, in having quality insulation.

RIEGER: Insulation is just as important for air conditioning as for electric heating.

GEORGE: What is good for electric heat is good for air conditioning. What is good for air conditioning is good for electric heating.

DETGEN: Only the rich can afford not to insulate fully.

Here is how the Round Table sold the need of better insulation and equipment standards

MODERATOR: Electric heat will go further faster if you profit by the lesson of other industries and agree on quality standards before you get a lot of bad installations scattered around the country, and before you find a lot of builders installing electric heat not because it's better, but because they can put it in cheaper.

RIEGER: We can really mess this business up properly unless we get good uniform standards.

ZIMMERMAN: The more progress you make in developing good standards for electric heat, the easier it will be for FHA to do its job properly in evaluating electric heat correctly. How can FHA apply standards until the industry gives us standards to apply—something tangible to work with and something tangible to speak to? As long as the industry itself has no standards, FHA cannot be as effective as it would like to be in dealing with electric heat.

continued on p 168

WHY CAVALIER IS YOUR **BEST SOURCE** FOR **ELECTRIC HEAT**

CAVALIER electric heat requires no extra space for heating equipment, fuel storage, ducts, flues, chimneys . . . is usually the lowest cost automatic heating system you can install. Every room has its individual temperature control. Cavalier has real quality and a phenomenal record for trouble-free service year after year. Home owners love this completely clean automatic heat that requires little or no attention year after year.

CAVALIER has a complete line of electric heaters, all *quality guaranteed* by a financially sound firm known since 1865 for its policy of making quality products and pricing them fairly *at all times*.

CAVALIER equipment is soundly built. Each unit is individually tested, energized and high potted with 1,000 volts. Although repair parts are rarely needed, they are promptly available at reasonable cost.

CAVALIER is active in organizations devoted to the advancement of the building and electrical industries, distributes through electrical wholesalers and contractors.

CAVALIER is your assurance of Highest Quality products backed by sound and consistent business policies.



Personnel and equipment of the specialized research, engineering and testing facilities for Cavalier electric heat are outstanding. Cavalier was one of the first quantity manufacturers of electric heat and has always built to Highest Quality Standards.

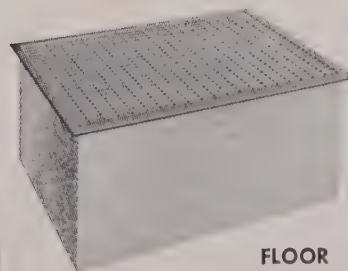
CAVALIER HAS A COMPLETE LINE



Cavalier

ELECTRIC BASEBOARD

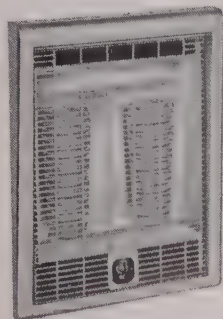
- 115 V. Duplex Outlets
- Built-in Thermostat
- Corner Piece
- End Caps



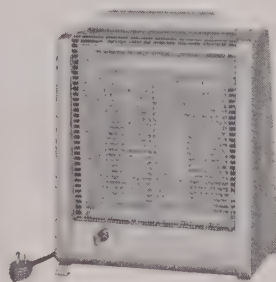
FLOOR
FURNACE
5 and 8 KW



CABLE
HEAT



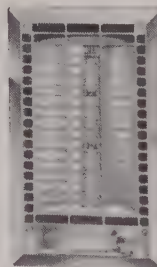
WALL INSERT
1 to 5 KW



PORTABLE
2, 3, 4 KW

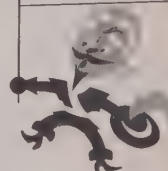


BATHROOM
Automatic and
non-automatic
120 and 240 volt



CATALOG
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REQUEST

HEAT BETTER
ELECTRICALLY



FIRST

in quality construction
in engineering advances
in safety
in sales making features

ELECTRIC HEATING DIVISION

CAVALIER CORPORATION, Chattanooga 2, Tenn.

OVER 90 YEARS OF **QUALITY PRODUCTS**

CAVALIER CORPORATION, Chattanooga 2, Tenn.

Please send the complete catalog on Cavalier electric heat to:

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____



Which type of electric heating packs the most sales appeal?

The answer is Fedders

Sells more home buyers faster

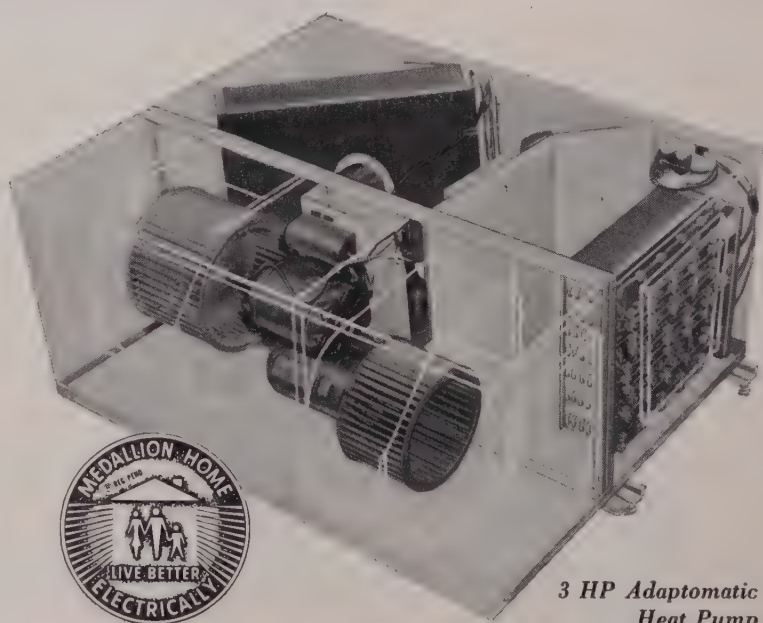
Fedders Adaptomatic adds that luxury extra to your houses that sells home buyers faster than ever before: All the benefits of electric heating—plus summer cooling.

In fact, the Adaptomatic gives you the biggest selling package in the homebuilding industry—year 'round comfort, extra cleanliness, automatic convenience, and the benefits of filtered, gently circulated warm air. Gives you the best economy story in electric heating, too. Since the Adaptomatic utilizes “natural” heat extracted from the outdoor air, electric heating bills are substantially lower than with resistance heating.

And the selling power of the Adaptomatic starts working for you early in the game—by attracting prospects to your development. There's selling magic in year 'round air conditioning today—and families head for the houses that feature it. This opens up merchandising and promotion opportunities that give you a big competitive jump on your homebuilding rivals.

Saves you money — While it makes you money

Fedders Adaptomatic Heat Pump saves you money right down the line. The first pleasant surprise is the price. This year 'round heating and cooling system costs only little more than a good conventional heating system alone



3 HP Adaptomatic Heat Pump

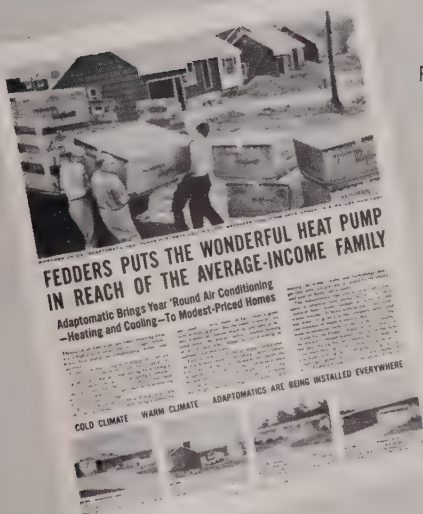
—pressurized condenser air system permits installation in any location in existing blueprints. Measures only 44½" x 37½" x 21¾".

... but adds more than \$1,000 in extra market value to your houses.

As for installation—your regular contractor can do it. No expensive specialists are needed. Because the all-in-one Fedders Adaptomatic is smaller and lighter, it goes in faster, fits anywhere in your existing house plans. No structural changes are ever needed. It arrives at your building site factory-assembled, factory-tested and completely pre-wired. All accessories and controls are included.

Which type is easiest to install, most economical to operate?

Adaptomatic Heat Pump



Response to this ad in Life from all over the U.S. demonstrates tremendous public interest in the Fedders Heat Pump. Everywhere, more and more people accept the idea that year 'round Heat Pump Air Conditioning is the sure sign of a quality home.

And there's another big saving—Fedders Adaptomatic usually involves lower electrical sub-contracting costs than baseboard and radiant heating systems.

Selling power proven across the country

Builders are reporting startling success with homes featuring Adaptomatics...in cold and warm climates...everywhere in the country. Local electric power companies and cooperatives, which have tested and recommended the Fedders Adaptomatic Heat Pump, stand ready to help you promote and merchandise as part of

their all-out LBE Gold Medallion Home Program.

Fedders provides attractive merchandising displays, consumer literature, ad mats that help you capitalize on the home comfort system of the future. Moreover, Fedders distributors have a special plan to help development builders install the Adaptomatic Heat Pump in model homes at extremely low cost. Call your wholesale distributor or mail the coupon direct to Fedders today.

FEDDERS

Adaptomatic

HEAT PUMP AIR CONDITIONER

FEDDERS CORPORATION—Dept. HH-129
Maspeth 78, New York

Gentlemen: Please send me, without obligation, information on your Adaptomatic Heat Pump model home plan.

PLEASE PRINT

Name

Street Address

CityState

Electric heat round table

continued



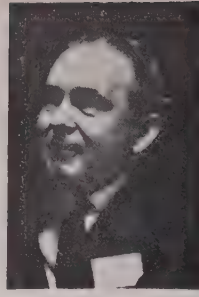
EVANS

We get more inquiries about electric heat than from any other campaign.



BUBB

I think it's the coming thing.



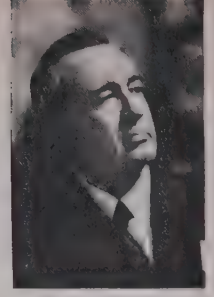
EMLER

We must work on the realtors who will have to sell electric heat to the public.



SPILLER

Our experience in Indiana proves the public is ready.



VENNARD

Electric heat is the heat of the future.

As long as there is confusion between various manufacturers there is bound to be some confusion in the way we treat their product. The more order the industry brings to its business, the more orderly FHA can deal with its product.

MCDANIEL: Good national standards would be a tremendous help to us all. We have had to take some pretty aggressive steps to protect our position, recommending against the installation of electric heat where the builder chose to take the cheapest possible approach without providing adequate safeguards for his customer.

TURNER: The utilities would have to set standards alone if that were the only way to get them.

ROGERS: We ought to have uniform performance standards. As of the day this Round Table met, there are no standards FHA and conventional lenders could use for electric heat.

WOLF: We need uniform standards for both construction and insulation.

RIEGER: How can the equipment manufacturers design economical equipment for heating and cooling until there are insulation standards that set reasonable limits on how much heating and cooling the equipment must deliver to keep the home comfortable?

SERFASS: A better insulation standard would have a profound bearing on the size of the equipment needed to do the job.

KREISER: Too many small manufacturers are finding it easy to get into electric heat. We have had no equipment standards to guide them—that is our problem for tomorrow.

MASON: If NEMA will adopt good equipment standards, that will greatly simplify our problem of adequate FHA standards.

MOELLER: ARI is beginning to recognize the need for heat pump standards, and I think ARI will soon have something to contribute.

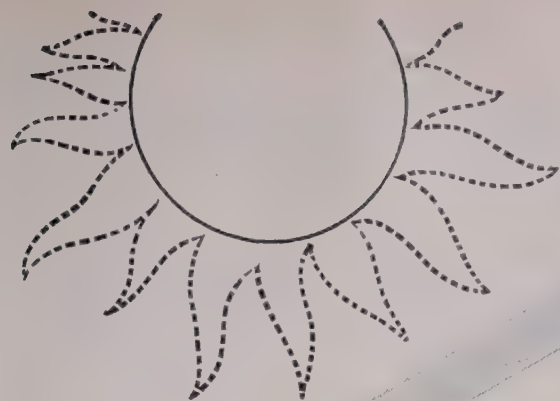
Manufacturers, utilities, and builders must share responsibility for better installation

BOOTH: Electric heat will move a lot faster if the utilities and the manufacturers undertake real responsibility to say to lenders and consumers: "This is a good deal, and we will keep it a good deal."

AYERS: Each of us has a job to do to protect the industry.

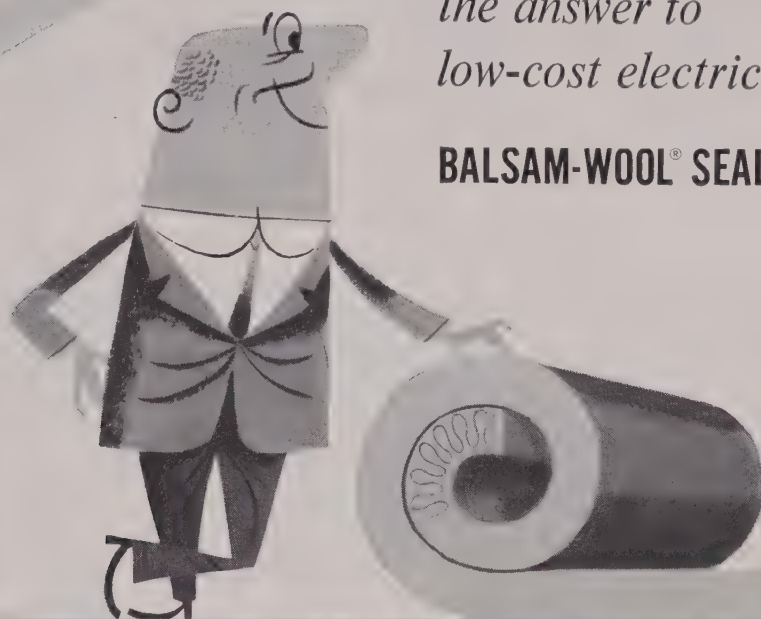
GEORGE: The utilities have the biggest stake in electric heating, so I believe that for the next four or five years we may have to take on an unusual responsibility for inspecting both the installation and the insulation. I question whether we can delegate this responsibility to FHA.

continued on p 172

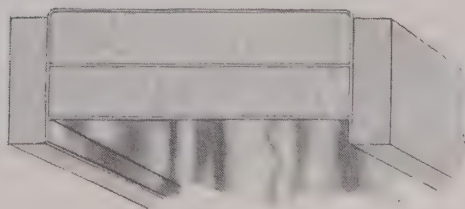


*the answer to
low-cost electric heat*

BALSAM-WOOL® SEALED INSULATION



A type for every need in electrically heated homes



Balsam-Wool is available with either reflective aluminum liners or tough asphalt creped liners which completely enclose the insulation mat. Thicknesses range from 1" to 5" and widths fit framing members spaced 16" and 24". The "U" values shown for the following recommended Balsam-Wool products include a correction for framing-member heat loss—something which is usually disregarded, although floor and ceiling joists occupy 10% of the area and wall studs, plates, etc., occupy 15%.

	"U" VALUES
CEILING	
Super-Thick (5")—with Reflective Liners	.045
Full-Thick (3 3/8")—with Reflective Liners	.062
Full-Thick (3 3/8")—with Regular Liners	.066
WALLS*	
Full-Thick (3 3/8")—with Regular Liners	.062
Double-Thick (2")—with Reflective Liners	.062
Double-Thick (2")—with Regular Liners	.075
Standard (1")—with Reflective Liners	.075
*With 25/32" Nu-Wood® Insulating Sheathing	
FLOORS	
Double-Thick (2")—with Reflective Liners	.051
Standard (1")—with Reflective Liners	.064
Double-Thick (2")—with Regular Liners	.079
Balsam-Wool Sealed Insulation Sold Only by Lumber Dealers	

Here's why:

- 1 Top Efficiency.** There's a big difference in insulation. Balsam-Wool's low thermal conductivity (k) value of .25 makes it one of the finest products on the market. The insulating "U"-value standards for electrically heated houses are adequately met and heat loss is reduced to a minimum.
- 2 Moisture Protection.** Electrically heated homes with higher inside humidity require effective insulation vapor barriers. The integral vapor barrier of Balsam-Wool (less than 1 perm) keeps the insulation and construction dry.
- 3 Wind Resistance.** Wind penetration reduces insulation value greatly. The sealed protective liners of Balsam-Wool blanket insulation provide effective wind-sealing.
- 4 Positive Application.** Easy to apply, Balsam-Wool stays in place. Its cellulose fibers have no splinter-like spines to cause irritation to workmen. Special flange construction permits fast application of insulation blanket.
- 5 Reflective Liners.** Balsam-Wool with polished aluminum-faced liners increases over-all thermo-resistance of the construction—especially important in insulated floors.



WOOD CONVERSION COMPANY

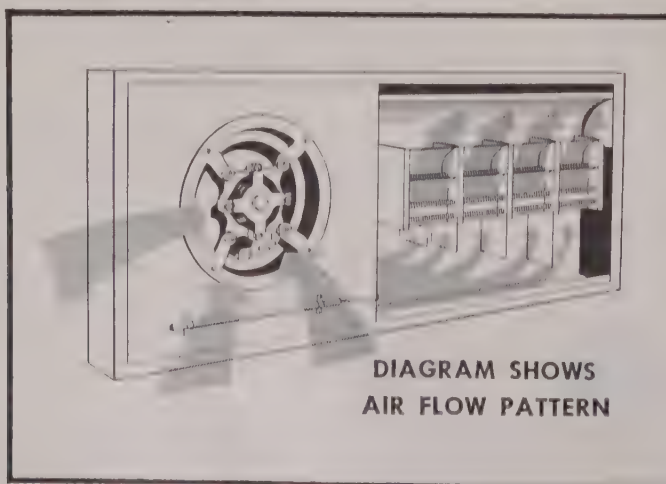
First National Bank Building, Dept. 236-129
St. Paul 1, Minnesota

R&M-Hunter introduces AN ENTIRELY NEW TYPE OF ELECTRIC HEATING



R & M-Hunter
Forced Air
Baseboard

BASEBOARD + FORCED AIR
comfort with economy



Advantages of two proven heating principles combined

The R&M-Hunter FORCED AIR BASEBOARD combines the best features of forced air and baseboard heating. Cooling floor-level air is whisked into the unit by a quiet, low-speed centrifugal blower. This air is forced over a series of heating elements for fresh warmth and delivered directly into the "living zone" at the temperature selected for complete comfort. Positive control of circulation at low levels mixes the tempered air with room air immediately. Outer wall and window areas are kept at or near room temperature for economical operation. Floor-level thermostat and return air inlet maintain ideal comfort conditions, with a minimum of heat loss.

Backed by R & M-Hunter's 80-year experience in electrical equipment

SAFE! CLEAN! QUIET!

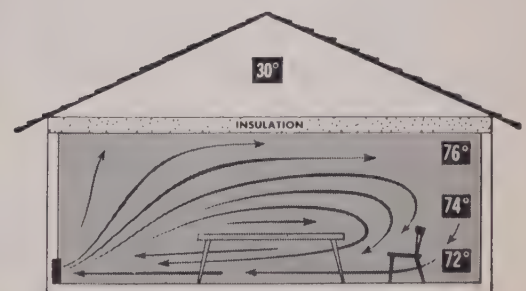
Heat control in each room

Lower maintenance and
decorating cost

No cold drafts or hot blasts

No ducts—no heater closet

The Forced Air Baseboard harmonizes
with modern room interiors;
paint to match.



EVEN FLOOR TO CEILING TEMPERATURE

SAVE ON COST AND INSTALLATION

The new Forced Air Baseboard costs much less than convection baseboard, and is easier to install. No expensive accessories, no parts to assemble, no complicated wiring. Underwriters' Laboratories listed.

Engineered for compactness — Dimensions are: 33" long, 13" high, 3 7/8" deep. When recessed, unit extends only 1 3/8" from wall.

1000 to 4000 watt capacities — 1000, 1500 and 2000 watt models are available with or without thermostats. One thermostat-equipped model can control two or more units in a room. 2500, 3000 and commercial 4000 watt models have thermostats for individual zone control.



R&M-HUNTER ALSO MAKES CONVECTION BASEBOARD, WALL, AND BATHROOM HEATERS

R&M-Hunter
FORCED AIR BASEBOARD
ELECTRIC HEAT
It's Matchless!



Mail now for data

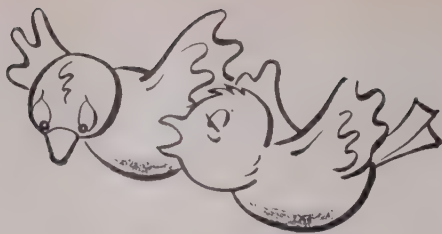
Hunter Division—
Robbins & Myers, Inc.
2448 Frisco Ave., Memphis 14, Tenn.

Send complete data on the new Forced Air Baseboard to:

Name _____

Address _____

"Why fly South?
We can toast
Our toes on that
warm roof all Winter"



Inadequate Insulation is strictly for the birds...

particularly as it applies to

ELECTRIC HOUSE HEATING

The economics of electric heating is first of all based on efficiency — 100% of the electric energy is converted into electric heat. But this ideal efficiency is dependent upon retaining this heat in the home by installing more than the usual amounts of insulation. Because of the lower equipment cost involved with electric heating, (you do not need ducts, chimneys or piping), the builder can install this extra insulation and end up with a lower total cost than for a poorly insulated home with a less efficient type of heating system. Indeed, an electrically heated home, well insulated, saves both the builder and the home owner money and provides a much more convenient, comfortable and salable home!

Since it costs no more to install Baldwin-Ehret-Hill insulation with a top performance of "K" 0.27 (at 75 F mean) than less efficient insulations, it pays to specify and install

BALDWIN-EHRET-HILL *Rite-Weight* MINERAL WOOL INSULATION

Remember, the "K" Factor is the key factor in selecting insulation. The lower the "K" the better the performance.



Write for the complete story in
our new eight-page brochure:
"The new way to insulate homes
to get the full benefits of
ELECTRIC HEATING."

BALDWIN-EHRET-HILL INCORPORATED

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HUNTINGTON, IND.
HUNtington 124

HOUSTON, TEX.
JACKson 3-7397

TEMPLE, TEX.
PROspect 3-2192

Electric heat round tables

continued

KEYES:

Whether it is new construction or existing construction, somebody has to do the inspecting. Somebody has to be there who knows what he is looking at and has the guts to say it should be changed and must be changed if it does not meet with the requirements.

MILLER:

Today nobody inspects insulation, and that is the big problem. FHA does not inspect it. Nobody looks at it.

MUNGER:

The utilities must inspect it—period.

OURSLEER:

In Pittsburgh the utility inspects the insulation, and we do not allow the low electric heating rate unless the house is built to the specifications we lay down.

SANSBURY:

The utilities will have to inspect not only the insulation, but a number of other things for a long time to come.

LOEBER:

Inspecting the insulation will also let the utility check whether the amount of glass used will make electric heat impractical.

KREISER:

If the utilities will say "install only equipment that meets NEMA standard," and if they will police it, that will help a lot.

GEORGE:

My company assumes responsibility up to this point: if the job is not properly installed and insulated, we notify the customer that his operating cost of heating by electricity will not be what he could expect with a properly installed job.

TURNER:

The insulation manufacturers have a big responsibility where their product is used.

DETGEN:

We manufacturers recognize our responsibility, and I believe we are going to change our way of thinking.

AYERS:

I am encouraged to hear Mr Detgen say that, because in our market we have not had as much manufacturer interest in the problem of the applicator as we would have liked.

WOLF:

The manufacturer should design products that are as nearly foolproof in application as possible.

RIEGER:

If the electric bill is higher than we would have anticipated, or if the house does not

continued on p 176



CHROMALOX

Electric Baseboard Heating

No Drafts! No Dirt! No Furnace! No Ducts!

Save the cost of furnace, ducts, pipes, chimney—and enjoy modern, controlled comfort at its best. *Chromalox* electric baseboard units heat your whole home . . . yet you can adjust the heat separately for each room. And housework is much easier. There is no dirt or dust . . . and no fumes . . . with clean electric heat.

Chromalox Electric Baseboard Heating is economical to install and operate. Put smart-looking baseboards under windows and along cold outside walls . . . in new homes and old. They're the perfect answer for added rooms.

Automatic electric heating is so economical and safe that it's also the sole heating system for many of today's schools. And the name *Chromalox* gives you the assurance of dealing with the world's largest manufacturer of electrical heating equipment for home and industry.

FREE BOOKLET tells all you want to know. Just tell us whether you're interested in a new home or remodeling. **Write today.**

ADVERTISED IN
LIFE

*Produced to meet NEMA Standards
available with exclusive Thermal Sentry*

Interest in electric home heating is at an all-time high

CHROMALOX heat will sell your homes

This ad appeared as part of a special 32-page "Live Better Electrically" section in the September 14 issue of *Life* magazine. This special supplement was the largest single advertising effort in *Life's* 23-year history.

In addition to *Life's* 15-million circulation, an additional 4-million copies are being mailed by electric power companies to their subscribers.

This ad is just one example of the strong *Chromalox* national promotion to help sell the truly all-electric home. And we'll help you. Not just with national advertising . . . but with model home signs, banners, local newspaper ad mats, radio and tv commercials, model home displays, hand-out literature, direct mail . . . a complete promotional package.

Get more information. *Today* . . . fill out and mail the coupon.

Edwin L. Wiegand Company
7500 Thomas Boulevard
Pittsburgh 8, Pennsylvania

Send me your free "Information for Builders."

I plan to build _____ homes in the next 12 months.

☐ I am considering electric heat for the first time.

☐ I have built _____ electric heat homes, using (brand) _____ heaters.

Name _____ Title _____

Company Name _____

Address _____

City _____ Zone _____ State _____



CHROMALOX

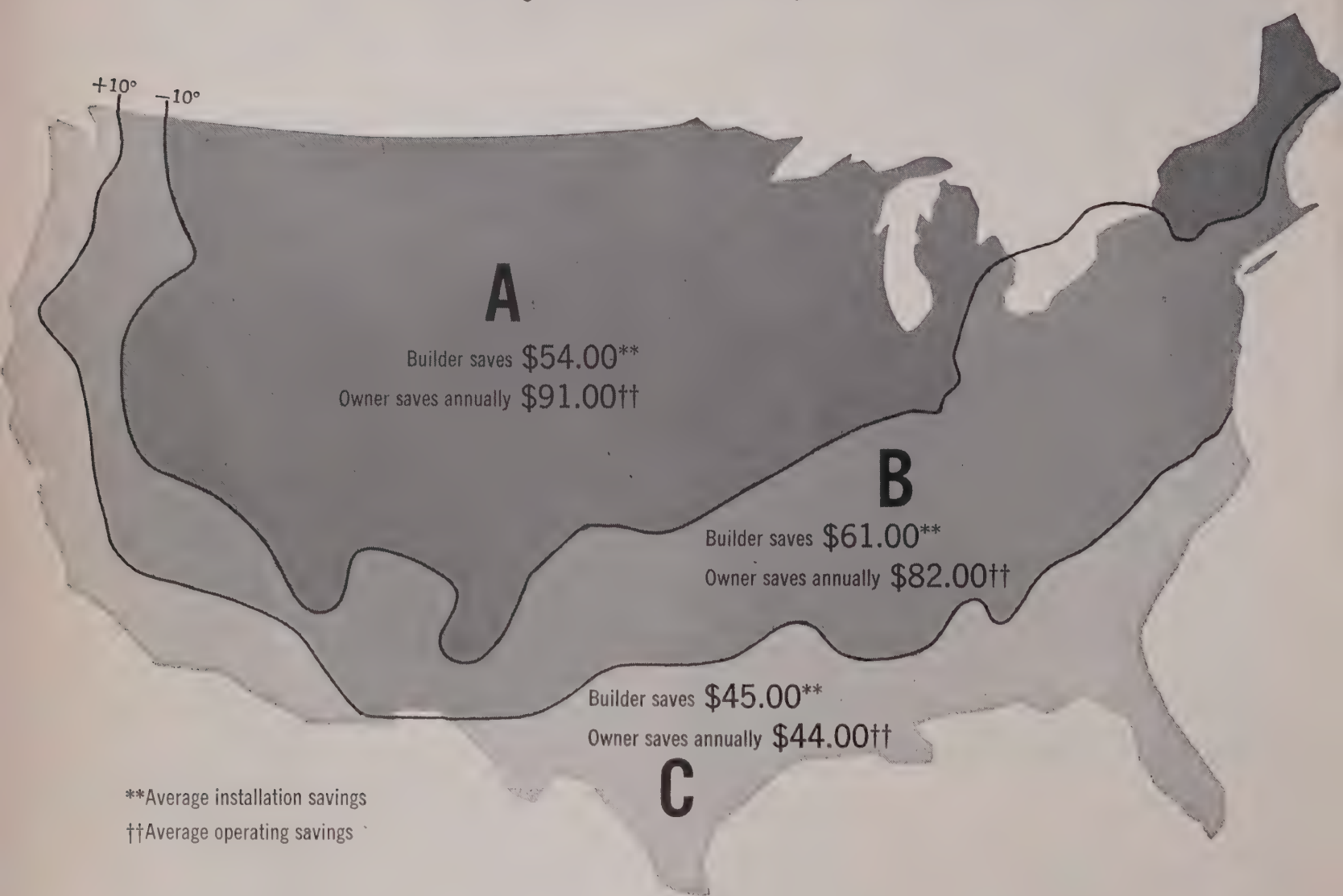
EDWIN L. WIEGAND COMPANY

7500 Thomas Boulevard • Pittsburgh 8, Pa.

HOW ELECTRIC HEATING AND AIR

when you "Comfort Condition"

with full Fiberglas Insulation*



Savings show how builders and owners gain from Comfort-Conditioned Home insulation standards for electrically heated and air-conditioned homes. Builders profit from resulting smaller, less costly heating-cooling equipment. Owners can enjoy more economical operation.

CONDITIONING COSTS COME DOWN



ZONE	AVERAGE INSULATION REQUIREMENTS IN CEILINGS, WALLS, AND FLOORS		BUILDER'S AVERAGE NET SAVINGS	OWNER'S AVERAGE ANNUAL OPERATING SAVINGS
	TO MEET BOTH 40 Btuh† per sq. ft. heat loss and 30 Btuh per sq. ft. heat gain	TO MEET FHA minimum of 50 Btuh per sq. ft. heat loss		
A	6-3-3	3-1½-0	\$54	\$91
B	6-3-3	3-0-0	61	82
C	6-3-3	3-0-0	45	44

SAVINGS are estimated on heating-cooling standards generally accepted by industry specialists: a maximum of 40 Btuh per sq. ft. heat loss in winter and 30 Btuh per sq. ft. heat gain in summer.†

‡New FHA MPS requirement for electrically heated houses.

Full insulation standards are met in more than 80,000 homes built by over 800 builders participating in the Comfort-Conditioned Home Program since 1957. The actual heating-cooling operating savings were proved in the Low-Cost, Comfort-Test Program sponsored by Owens-Corning Fiberglas. Since 1955, utilities serving 150 test homes coast to coast have kept records of heating-cooling costs. The result: proof that the average 1200 sq. ft. home can be conventionally heated and cooled for about \$12.00 a month.

For complete data on insulation standards for the Comfort-Conditioned Home in your area (and for information on how the Comfort-Conditioned Home merchandising program can help your sales), write: Owens-Corning Fiberglas Corp., Dept. 67-L, National Bank Bldg., Toledo 1, Ohio, or call your local Fiberglas Branch Office.

LOCATION by city shows variance in estimated owner savings as affected by local climate and utility rate.			
CITY	ANNUAL OPERATING SAVINGS	CITY	ANNUAL OPERATING SAVINGS
Atlanta	\$ 36	Minneapolis	\$116
Boston	140	New Orleans	49
Charlotte (N. C.)	74	New York	84
Chicago	104	Philadelphia	70
Dallas	53	Phoenix	43
Denver	82	Pittsburgh	83
Indianapolis	80	Portland (Ore.)	29
Kansas City	100	St. Louis	75
Los Angeles	44	Salt Lake City	64
Miami	38	Washington D. C.	66

†NOTES:

Figures in savings chart are based on these conditions.

1. 30' x 40' ranch over vented crawl space.
2. Windows and doors in Zone A 25-35% gross wall area; 40% in Zones B & C.
3. Double glazing year-round and storm doors in 0° and colder.
4. Total heat gain through glass in summer, 45 Btuh per sq. ft. with single glazing; 33 Btuh per sq. ft. with double glazing.
5. Reduced cost of resistance heating equipment based on \$50 per Kwh.
6. Reduced cost of cooling equipment based on \$200 per ton.



SIGN of a new
standard of comfort
in new homes
across the nation.

FULLY INSULATED with **FIBERGLAS**

Full **HOUSEPOWER** for Electrical Living
Today and Tomorrow

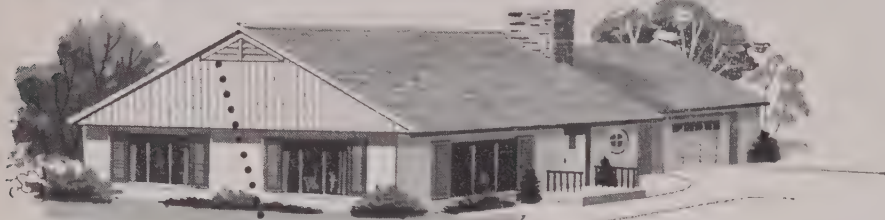


*T-M. (Reg. U.S. Pat. Off.) O-C-F. Corp.

Prefab or custom built . . .

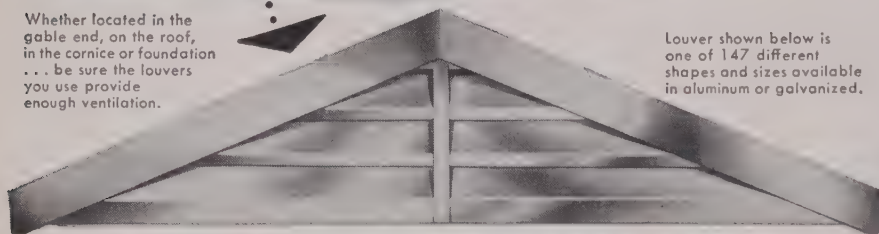
Electrically Heated Homes

DEMAND Proper Ventilation



Whether located in the gable end, on the roof, in the cornice or foundation . . . be sure the louvers you use provide enough ventilation.

Louver shown below is one of 147 different shapes and sizes available in aluminum or galvanized.



Lo Man Co TWIN SECTION JUMBO LOUVER

14 models available in 6, 8, 10, and 12 ft. base lengths, from 2½ to 5" roof pitches. Easily installed, sections can be used separately in modern shed roofs, behind knee walls, etc. Complete with insect screens and wide mounting flange.

What PROPER VENTILATION means to you

Proper ventilation has two important functions in the modern home—to remove condensation and to aid in home cooling. *Condensation problems are a certainty without proper ventilation.* The tighter wall construction techniques and improved insulation now used to save on heating costs and increase home comfort can cause excessive humidity build-up within the house. This excess moisture must be vented in order to avoid a variety of undesirable conditions—damp spots on ceilings and walls, cracks and checking of plaster, saturated inefficient insulation, blistering and peeling exterior paint, warping and/or rotting of wood components. *Proper ventilation is also important in home cooling.* The first step in efficient cooling is to exhaust the build-up of warm air trapped in the attic area which collects from sun heat and rises from below.

- Always provide enough free area of ventilation to adequately ventilate attic or foundation areas
- Be sure you locate ventilators properly within the attic or foundation area to stimulate maximum air circulation
- Always use metal ventilators because they provide more ventilation, they are permanent and upkeep free, more weather resistant, faster and easier to install and more economical per square foot than the building materials they replace.

America's Most Complete Line of Aluminum and Galvanized Louvers



Write for catalog



Louver Manufacturing Co.

3607 Wooddale Avenue
MINNEAPOLIS 16, MINN.

Gentlemen: Please send me your complete line catalog including your ventilation guide on how to compute free areas of ventilation needed for various sized homes.

NAME _____
ADDRESS _____
CITY _____ STATE _____
TITLE _____

Electric heat round tables

continued

heat properly, General Electric takes the responsibility, provided we have the right to go in and tear out a section of the wall to make sure the house is insulated properly. If not, it's the builder's responsibility.

SWANSON:

The builder is the central responsible party. Let's help the builder in every way we can, but let's not let him delegate his responsibility to someone else.

GEORGE:

Most of our complaints come from buyers of production houses.

McDANIEL:

The builder is responsible, just as he is responsible for making the doors fit.

Makers and utilities must cooperate to assure consumers dependable service

GEORGE:

If the utilities are going to promote electric living, the utilities will have to take the responsibility that the customer gets service.

McDANIEL:

We feel we have an obligation to assure homeowners that they get the type of service that they need; but if a utility offers complete service, many dealers would be glad to turn over the entire burden to the utility.

AYERS:

Of the 500,000 electric heat installations, only 7.1% are heat pumps. The rest of them are direct heat, on which there is practically no service needed. With one exception, the manufacturers have done a magnificent job servicing heat pumps in the Chicago area. The heat pump servicing problem is not as great as you go further south, but at 14F below zero you find out things you did not realize about heat pumps. But even at 14F below zero, they can be made to work.

CAMPBELL:

The heat pump is new and has lots of rotating parts; it is not absolutely trouble-free yet, but with time it will be. Right now the big problem is to provide trained service. A heat pump should be installed only where we can provide the required service.

continued on p 178

HOUSE & HOME

don't
leave
holes
in the
insulation!



In electrically-heated homes...

FILL THEM WITH

Thermopane[®]
INSULATING GLASS

HEAT LOSS through *Thermopane* is about half that through single glass. So when you put *Thermopane* in every window, it cuts the cost of heating that house substantially. And in summer it cuts air-conditioning costs.

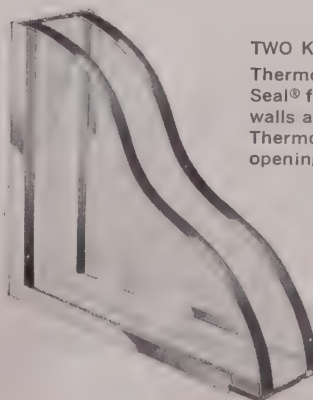
Now, no matter what type of window you prefer... double hung, bow, awning, hopper or casement... you

can get it glazed with *Thermopane*. Point out to home prospects that you have used the *genuine* product... show them the name is delicately inscribed on the glass. *Thermopane* is made in the U.S.A. by Libbey-Owens-Ford Glass Company only.

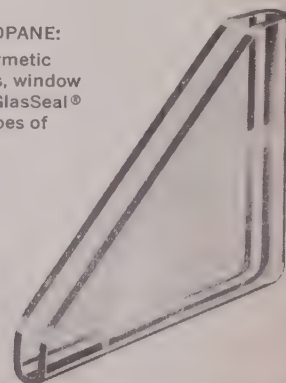
ADVERTISED ON "BOURBON ST. BEAT", ABC-TV NETWORK, MONDAY NIGHTS in most cities. Consult local station schedules.



LIBBEY-OWENS-FORD
608 Madison Avenue
Toledo 3, Ohio

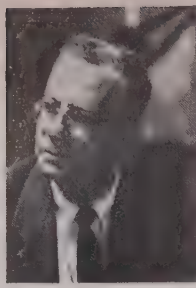


TWO KINDS OF THERMOPANE:
Thermopane with Bondermetic Seal[®] for picture windows, window walls and sliding doors; *GlasSeal*[®] *Thermopane* for many types of opening sash.

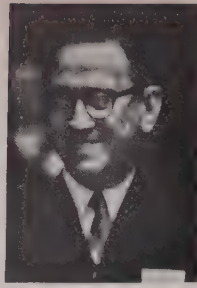




ASHLEY



LEISK



GALE



ENSLEY



MILLER

But a big education job still needs to be done on lenders, consumers, and the housing industry

LYON: The ignorance on this subject is colossal. The lenders, along with everyone else in the industry, need to be better informed.

CARPENTER: If lenders do make any objections, it seems to me it would be up to the people who want to promote electric heat to convince us by education that this is a good product; that it will not in any way detract from but rather will add to the security of our investment.

EVANS: It's up to the manufacturers to see that architects and builders have the information they need.

WITTING: There's a tremendous education job that has to be done first on all levels—with the consumer, with the builders, with the distributors and dealers, with the installation contractors, and with some of the utilities, too. We plan to spend \$2½ million on this educational program in 1959.

BROWN: The education program must be aimed not only at consumers, but building professionals, too.

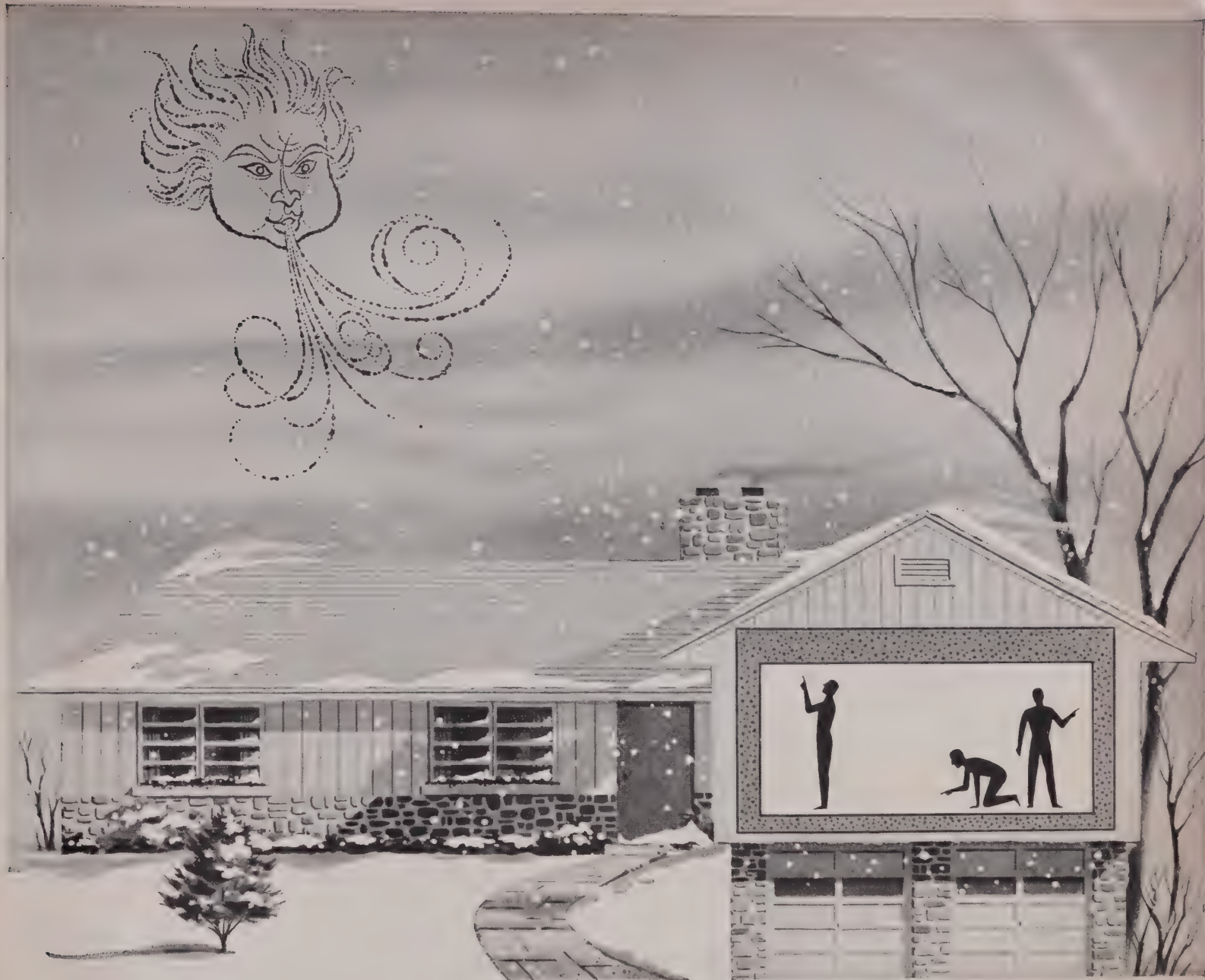
ENSLEY: I am delighted to find how much technological progress has been made, and I think it is extremely important to get the technological developments and economy known to the public, and also to the builders and the lenders.

ASHLEY: We have a very good story about insulating windows—a story that should be brought home in as clear and quick a manner as is possible, particularly to the lenders. For a great many years we have spent a lot of time and effort and money in developing data on radiant heat input. This requires a knowledge and understanding of proper orientation of housing so that the low-hanging winter sun's rays come through the glass area facing to the south and are trapped by a double-glass insulation and supplement the heat that you pay for.

LEISK: It all boils down to the need of education. We don't recommend anything unless we know all the facts. If we knew more about electric heat we would be able to appraise it more intelligently.

END

*On the following pages:
new NEMA quality standard,
industry progress toward an all-weather comfort standard,
and what you should know about electric heat controls.*



For peak insulation performance in electrically heated homes...
install *full-thickness* Johns-Manville Spintex®

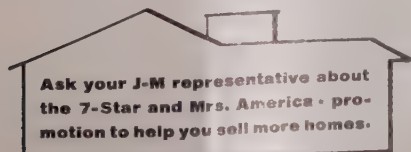
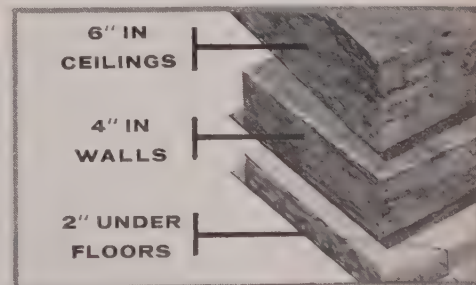
- Cuts kilowatt loads for heating up to 58%
- Cuts electric bills for air conditioning up to 30%

Johns-Manville full thickness Spintex Insulation enables home buyers to enjoy the comfort of electric heating and air conditioning at substantial savings in operating costs. And the lower operating costs frequently permit buyers to qualify for a higher FHA mortgage.

The builder, too, saves money because full thickness Spintex can mean smaller and less expensive heating and cooling units to do the job. Labor costs for installation of insulation are about the same, irrespective of thickness.

Full thickness Spintex is a must for electric heating and air conditioning because it follows the insulation standard considered essential by the National Electrical Manufacturers Association, the National Mineral Wool Association and by electric utilities.

For a copy of "Comfort And Its Control In Light Construction," write to: Johns-Manville, Box 111, New York 16, N. Y. In Canada, Port Credit, Ontario.



*REG. U. S. MRS. AMERICA, INC.

JOHNS-MANVILLE



Here is the new NEMA quality standard for direct heat

Two weeks after the second round table, quality performance standards for direct heating equipment and installation were unanimously approved by all the direct heat makers in the National Electrical Manufacturers Association.

Their adoption crowned a year-long effort by the leading manufacturers to protect electric heat against getting a bad name from too-cheap installations.

The first drive to get NEMA to set a floor under quality fell short of the required 90% approval last spring, but the first round table made the need of quality standards so clear that this fall the standard was adopted without a single dissenting vote.

It is now available from NEMA for 30¢ as Standard HE 2-1959.

No. 1 promoter of the standard is Fred Kreiser, chairman of the NEMA direct heating committee. Explaining its key points he said:

"These standards should:

1. Upgrade the quality of equipment used;
2. Arrest the so-called wattage race—the ridiculous and suicidal race to sell the most heat for the least dollars by passing as much heat as possible into as short an enclosure as possible with the fewest wires to connect;
3. Prevent adverse customer reaction to
 - a. wall streaking and discoloration of draperies;
 - b. smoke and fumes from 'too hot' equipment;
 - c. fires.

"Obtaining these standards was not easy, for they will require some manufacturers to modify their designs, either by giving up construction they considered saleable features or by producing more expensive equipment; but now I hope it will be relatively easy to get manufacturers who are not members of NEMA to swing behind them.

"We will offer a labeling service, so that manufacturers, whether or not they are members of NEMA, can advertise that their product meets the NEMA standard, and we hope the utilities will help us in our unrelenting task of persuading contractors to sell up instead of selling down. We hope the utilities will help us by saying: 'Install only equipment that meets NEMA standards.'"

The new standards cover the performance (but not the appearance) of baseboard heaters, radiant wall heaters, and ceiling cable. For each they prescribe detailed performance tests. They set reasonable steps for wattage ratings in 250-w increments for baseboards and wall heaters, mostly in 200-w increments for ceilings. They standardize voltage ratings at 120-v, 208-v, and 240-v. They standardize baseboard length increments on the 4" module to simplify selection by architects, builders, and contractors. They recommend power connections using the same 60 F wire used for lights, switches, etc.

For radiant wall heaters the new standard limits output per sq ft to 1400 w and limits the maximum heat in front of the heater to 325F, which is well below the ignition point of commonly-used fabrics. Thermal cutouts are required, particularly for fan-driven equipment, where they are important in the event of motor failure. *For ceiling cable* the new standard suggests a 20' limit for the longest straight run, in order to sidestep possible expansion problems in long plaster runs. It forbids the use of ceiling cable behind acoustical ceilings.

For baseboard heaters they set a 194F maximum for the temperature of the sheet metal enclosure. This is cooler than any steam radiator and cooler than most hot-water radiators. Most manufacturers will actually strive for lower temperatures, but

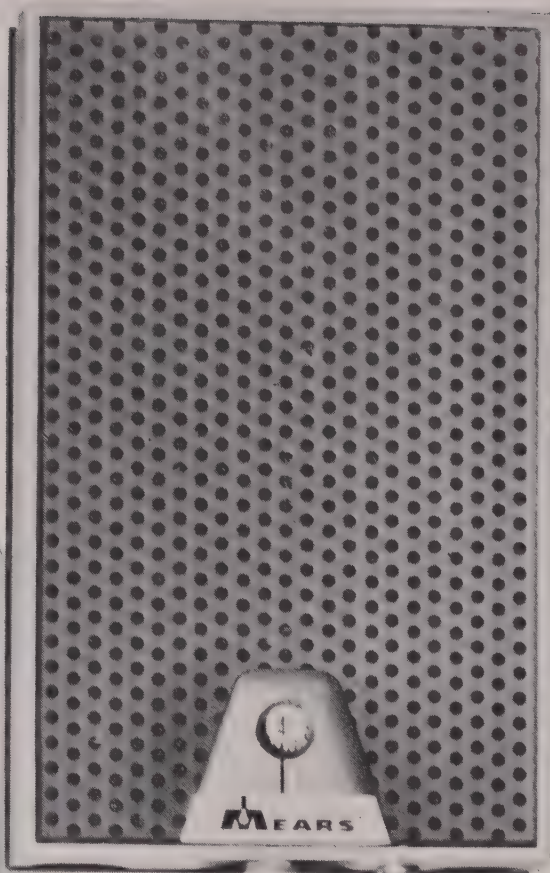
not less than 160F because 160F is needed for adequate floor-level radiation to prevent cold floor complaints. They also set a 200F maximum for outlet air temperature, in order to minimize wall streaking and discoloration of draperies, slip covers, etc sometimes caused by hot moving air. (But some materials discolor at very low temperatures: nylon, for example, even at 90 F.) *Continuous linear thermal cutouts* are recommended as "a standard for future design" because such a device was not available when the NEMA standard was adopted. This very desirable feature has just recently been developed by certain thermostat manufacturers and will soon be offered by many direct heat manufacturers at a very nominal added price. And when that happens it will undoubtedly become a NEMA standard.

The device would run the full length of the baseboard heater, and responds to overheat conditions developed within any 1' increment of length, deenergizing the complete section of the baseboard. Heating operation is resumed when the homeowner manually resets the thermal cutout, after removing the cause of the overheat condition (which restricted the air-flow). This assures complete and ultimate safety of the baseboard heater, preventing any possible trouble which might otherwise result from a bed, a divan, or a pillow blocking off the air-flow. The thermal cutout deenergizes only one section of baseboard, the section where the overheat condition might result; the other sections in the room continue to operate, to keep the room warm.

For all-weather comfort standard, see p 182

MEARS

the BEST for electric heat



*National advertising is telling
your prospects about the finest
in electric heat thermostats*

"DECORATOR" THERMOSTAT

Your best customers and prospects are reading about the new 1960 Mears "decorator" thermostat in *House Beautiful* this year. Advertisements starting in August have been telling them about the 1960 model . . . the M-6 series . . . the stylishly slim, dependable electric heat thermostat . . . the only thermostat recognized in the 1958 *Annual Industrial Design Review*.

We invite you to learn more about the "decorator" and other Mears electric heating controls. Call your local distributor, or send coupon (right) today for informative catalog.

GREATER ACCURACY

The double-line break of the M6-D "decorator" offers the greatest accuracy and quickest response of any of today's thermostats. Heat anticipation assures "floating" heat without variation.

Double-line break gives additional safety, too, and you need to stock only the M6-D to fulfill *all* building code requirements. This greater accuracy, safety and stocking convenience combine to make the M6-D "decorator" well worth its small additional cost.



*Face panel easily
painted to blend
with walls.*

Positive snap action switching

is another of the many reasons why the 1960 Mears "decorator" thermostat is the finest in electric heat controls. There's no slow, prolonged "sizzling" period when the "decorator" turns on or off. Instead, there's split-second response with immediate contact.

For decorating versatility, an antique gold trim ring attractively accents the Desert Tan face panel, which can be painted to blend with the walls or special decor. With the "decorator" you and your customers are assured accurate, dependable, stylish temperature control backed by Mears 18-month warranty.

CONTACT YOUR ELECTRICAL DISTRIBUTOR FOR FULL INFORMATION, OR SEND FOR INFORMATIVE CATALOG.

MEARS ELECTRIC CONTROLS, INC.
Swan Island, Portland 17, Oregon
Please send your catalog on the new "decorator" thermostat and names of suppliers in our area.

Name _____
Address _____
City _____ Zone _____ State _____
Profession _____

The new all-weather comfort standard: a progress report on industry agreement

Said Merrill Skinner of Union Electric at the round table: "The fuel for electric heat is more expensive, so we must pay more attention to insulation."

Said Francis Dutcher of Johns-Manville: "The coming of electric heat is doing more to improve insulation than any other thing that has happened."

Said C.K. Rieger of General Electric: "Insulation is just as important for air conditioning as for electric heat."

So the first result of the electric heat round tables was a great getting-together of competing manufacturers to iron out their differences and disagreements and develop a year-round all-weather comfort standard for insulation.

As soon as the industry can agree on such a standard, FHA will make it official, not as a minimum requirement, but as a "preferred standard" for the guidance of FHA appraisers and credit examiners in fixing the valuation of electrically-heated or air conditioned homes and in estimating the operating cost of heating and cooling.*

"This standard will save more on the first cost of installing air conditioning and electric heat than it would add to the first cost of insulation by requiring more than the present FHA minimum," says G.R. Munger of Owens-Corning, "and it will save the buyer of an electrically-heated and air-conditioned home at least \$125 a year on operating costs."

"For a 1200 sq ft house the insulation needed to meet this new standard for air conditioned and electrically-heated homes should cost only about \$50 more than the insulation needed to meet the quality standard for non-air conditioned homes with conventional heating (H&H, May, p 175)."

Before the round tables there was great confusion

Before the round tables FHA had no insulation standards or requirements at all covering heat gain during the cooling season, and the FHA standard for heat loss in winter permitted such a waste of heat (50 Btuh per sq ft outside measurement) as to be completely impractical for electric heat and extravagant for any type of heat.

Before the round tables the insulation industry could not agree on a performance standard. Its 6-4-2 standard (6" in the ceiling, 4" in the wall, and 2" over unheated crawl space) made no allowance for the differing K-factors of different types of insulation (glass fibre, mineral wool, balsam wool, foamed plastic, reflective, etc), so many manufacturers would not support it. For some climates it required too much insulation; for most climates it provided too little.

Since the round tables most of this confusion has ended

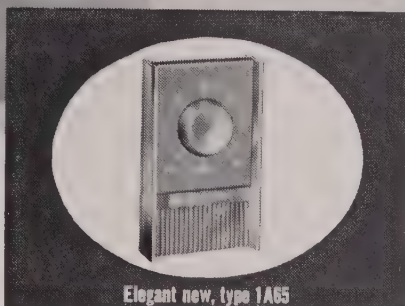
Industry approved insulation standards will soon be available covering insulation for both air condition and electric heating, backed by an industry standard for calculating heat gain.

continued on p 184

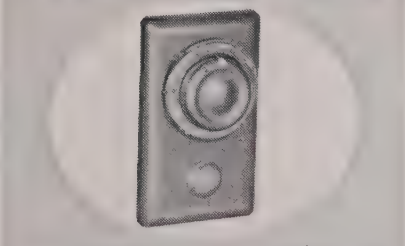
*Without waiting for the new industry standard, FHA issued a directive from Washington Oct 23 stipulating a maximum heat loss of 40 Btuh per sq ft outside measurement for electrically-heated homes. This directive also changed the FHA method for calculating current consumption which had been badly overestimated under previous method, see p 159.



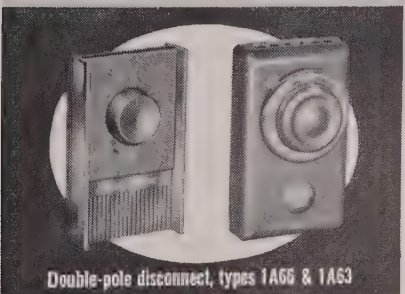
INSIST ON THE BEST in electric heat THERMOSTATS... "WHITE-RODGERS"



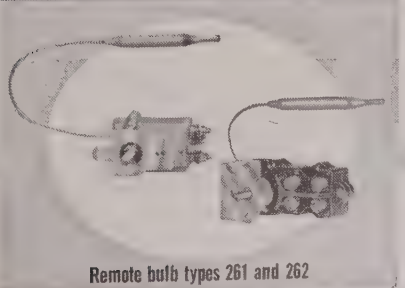
Elegant new, type 1A65



World's best seller, type 1A61



Double-pole disconnect, types 1A66 & 1A63



Remote bulb types 261 and 262

BEST- Designed

Elegant appearance created by designer Earl Claus, fits into any decor. Easy to install, simple to wire.

BEST- Performing

Sensitive to *both* radiant heat and air temperature. Silent switch, rugged construction, dependable operation.

BEST SELLERS!

More than 50 manufacturers of electric heating equipment put their brands on these 'stats. Acceptance of White-Rodgers is several times greater than all other makes combined.

BEST for YOU

If you use, install or specify electric heating, insist on White-Rodgers thermostats.

Write for free color folder R-1625.

IN ELECTRIC HEAT THERMOSTATS WHITE-RODGERS IS THE LEADER

WHITE-RODGERS

ST. LOUIS 6, MISSOURI

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WHI-234-R

Between the round tables the biggest manufacturers got together and reached a tentative agreement:

1. to scrap the 6-4-2 standard in favor of a performance standard;
2. to make this performance standard applicable to both air conditioning and electric heating;
3. to set the maximum heat loss somewhere between 30 Btuh and 40 Btuh per sq ft and the maximum heat gain somewhere between 20 and 30 Btuh.

At the second round table this tentative agreement was turned over to a steering committee representing the electric utilities and the manufacturers of air conditioning equipment, electric heating equipment, window glass, and insulation. And on Oct 16, after consulting both FHA and NAHB, the following sponsors agreed on a standard to submit for general approval:

American Electric Power Service Corp	Air-Conditioning and Refrigeration Institute
The Detroit Edison Co	Arkansas Power & Light Co
Johns-Manville Corp	Commonwealth Edison Company (Chicago)
Libbey-Owens-Ford Glass Co	The Cleveland Electric Illuminating Co
National Mineral Wool Association	Duquesne Light Co (Pittsburgh)
Owens-Corning Fiberglas Corp	General Electric Co
Pittsburg Plate Glass Co	Georgia Power Company (Atlanta)
Westinghouse Electric Corp	National Electrical Manufacturers Association
Edwin L. Wiegand Co	Southern California Edison Co (Los Angeles)
Wood Conversion Co	Union Electric Co (St Louis)

The sponsors of this proposed standard were most insistent on keeping it simple, so they tried to get a 50-word formula that could be applied anywhere and everywhere. They figured that in cold climates more insulation is needed to keep the house warm in winter, and in warm climates more insulation is needed to keep the house cool in summer, so about the same amount of insulation will pay for itself north or south. They wanted a standard the organized home builders would not fight as they fought the still-far-too-heat-wasteful FHA minimum requirement that took effect last July. And they wanted to avoid antagonizing the window and glass industries by setting the heat loss maximum so low as to permit only small windows in very cold climates, even with storm sash or double glass.

The compromise no one would use

So they compromised on a standard that would permit a maximum heat loss of 40 Btuh per sq ft outside measure with one air change per hour, and they compromised on a maximum heat gain of 30 Btuh.

Nobody objected to this easy-going compromise standard, but when it was submitted to the electric utilities for general acceptance it quickly developed that almost nobody would use it. For example, the utilities in St Louis and Detroit saw no reason to accept more than a 30 Btuh or 35 Btuh heat loss in their cities just because 40 Btuh is the practical maximum in Minneapolis. The air conditioning manufacturers saw no reason to accept a heat gain of more than 20 Btuh to 25 Btuh. And every one pointed out that in most areas the added insulation cost of cutting the maximum heat loss from 40 Btuh to 35 Btuh and the maximum heat gain from 30 Btuh to 20 Btuh would be only about \$50 for a 1,200 sq ft house.

So the sponsors are now putting the finishing touches on a new proposal that will require heavier insulation. This will make air conditioning and electric heating cheaper to operate in most areas, but will make special allowance for extreme climates and special allowance for areas where electric rates are so low that it may be cheaper to waste electricity than to add maximum insulation. The new proposal will include recommended U values to meet the requirements and recommended good practices to control heat and moisture by insulating, ventilating, double-glazing, and controlling condensation and sun effect.

ELECTRIC . .	<input type="checkbox"/>
GAS	<input type="checkbox"/>
OIL	<input type="checkbox"/>
COAL	<input type="checkbox"/>

Check Your Choice

Avoid heat loss with—



QUALITY WOOD WINDOWS

Wood is the one right material for residential windows. Findings listed below show heat loss of various materials 1" thick, 12" square, with only 32 degrees difference between inside and outside temperatures:

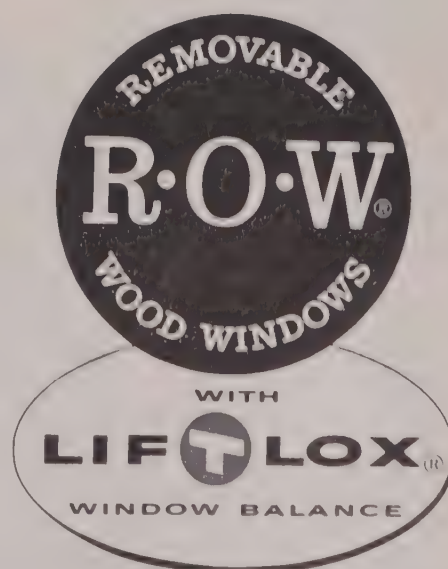
Wood . . 25 BTU's per hr. Steel 9,984 BTU's per hr.
Glass . 186 BTU's per hr. Aluminum . 45,312 BTU's per hr.

(Figures taken from Chapters 5 and 6 of Heating, Ventilating & Air Conditioning Guide, 1949.)

PRESSURE-TIGHT WINDOWS

R·O·W Wood windows are completely and carefully weather-stripped to prevent heat loss and air infiltration. Sash guides are held snugly against sash by concealed springs. These springs compensate for seasonal expansion and contraction—serve to eliminate both rattling and binding.

These same springs permit instant removal of sash for cleaning or painting of both sides—safely and quickly, inside the house.



R·O·W and LIFT-LOX are the registered trade-marks of the R·O·W Sales Company

R·O·W SALES COMPANY • 1300-12 ACADEMY AVENUE • FERNDALE 20, MICHIGAN

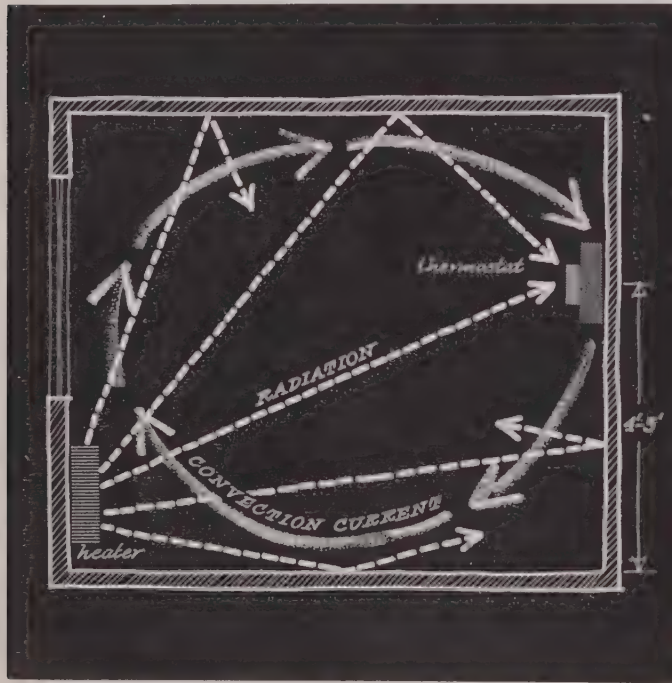
What you need to know about controls for electric heat

Unlike warm air and hydronic heating systems, most electric heating systems provide an independent heat source in every room. This makes possible one of the big advantages of electric heat: room-by-room temperature control. But it requires a separate thermostat for each room.

With separate thermostats, the homeowner can, for example, keep the living room at 72F, the bedrooms at 60F, the baths at 75F, and unused rooms at 40F. Thus, he not only has the exact temperature he wants in each room, but he wastes no heat when and where it isn't needed.

Experts agree that thermostat location is important

The consensus: thermostats for electric heat should be wall-mounted, generally opposite the heater. The reason:



most types of electric heaters warm the occupants of the room partly by convection (ie, by warming the air) and partly by radiation. So the thermostat should be located where it can sense both convected heat and radiant heat.

General rule: thermostats should be placed on an inside wall or partition, between 3' and 5' from the floor; placed so there is no obstruction between the thermostat and the heater, but placed so that radiant heat from other sources (like the sun, lamps, or radios) cannot strike the sensing element.

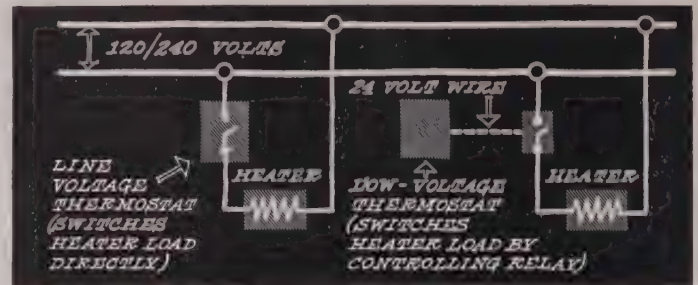
It costs more to wall-mount a thermostat than to build it into the heater. But most experts warn against integral controls, because they can be affected by outside temperatures (since most heaters are on an outside wall) and can be "fooled" because they are so near the heating element.

But experts disagree on two basic design questions:

Question 1: Which is the better sensing element for detecting radiant heat along with convected heat? The alternates:

1. A hydraulic-filled element which expands on a rise in air temperature and/or an increase in radiation. To increase its sensitivity to radiant heat, this type of element is usually exposed on the front of the thermostat unit.

2. A bi-metal element which expands with a rise in temperature or radiation. To increase its sensitivity to radiant heat, this type of element is sometimes tied to an exposed metal cover.



Question 2: Should thermostats be the line-voltage type or the low-voltage type? That is, should the 120v or 240v current to the heater flow through the thermostat and be switched within the thermostat unit; or should the thermostat be connected to a switching relay in the power line by low-voltage (24v) wire. Some manufacturers (see listing below) make both.

Say advocates of a line-voltage unit: it's cheaper. They claim that the only advantage of a low-voltage thermostat is the less expensive 24-v wiring from thermostat to heater (a factor since thermostats are usually located across the room from the heater). But, they say, the need for a relay usually cancels out this saving.

Say advocates of a low-voltage unit: it gives closer control. They claim that line current flowing through a thermostat will generate enough heat within the thermostat to "fool" it, cause it to control the room to a lower-than-desired temperature. Low-voltage advocates also point out that their system lends itself to a centralized control system (with a thermostat in each room, but a central panel for controlling room temperature throughout the house).

Because of code requirements, all units rate about the same: 22 amps at 120/240 volts. All manufacturers make both single-pole and double-pole models (double-pole units break both sides of the power line to the heater, are required by many codes for some types of heaters); and some manufacturers make "two-stage" or "modulating" thermostats which control two separate heaters—one operating under normal conditions, the second only under severe conditions.

You can get detailed information on available units by checking the coupon numbers in the manufacturers listing below.

GENERAL CONTROLS Line includes line-voltage thermostats for wall or baseboard mounting and low-voltage units. Covers are tied to the bi-metal for greater response to radiant energy.

For full data, check No. E1 on coupon, p 224.

MEARS ELECTRIC CONTROLS Line includes single-line break, double-line break, and modulating thermostats for two heaters. Bi-metal element has large sensing area for active response to radiant heat, and perimeter ventilation to increase sensitivity to temperature changes.

For full data, check No. E2 on coupon, p 224.

MINNEAPOLIS-HONEYWELL Offers wide line of line-voltage and low-voltage units. Compact hydraulic temperature-sensitive unit is responsive to radiant heat. Direct-acting switching operation. Units feature front terminals for easy wiring, compact size extending into room as little as 15/16".

For full data, check No. E3 on coupon, p 224.

PENN CONTROLS "Click dial" thermostats permit setting, even in dark, in 1° increments. Liquid-expansion element with large sensing area gives fast response to convective and radiant heating. Line- and low-voltage units available.

For full data, check No. E4 on coupon, p 224.

WHITE-RODGERS Hydraulic-filled radiant sensitive element reacts to radiant and convected heat. Sensing element is integral with setting knob, painted a hue with similar heat-absorption qualities to human body. Single- and double-pole units for any application.

For full data, check No. E5 on coupon, p 224.

WHAT MARKEL ELECTRIC HEATING MEANS TO YOU . .

BASEBOARD

Self-Contained, Pre-wired

HEAVY DUTY

- Quiet, Fan Forced
- Wall Insert

CEILING

- 3 Models
- Lites, Heats, Exhausts

RADIANT SPACE-SAVERS

- Bathroom Heat
- Fits in small spaces

The day is approaching when you, Mr. Builder, will offer your prospects homes *heated electrically*.

Interest and demand for electric heat are being created by the gigantic advertising power and merchandising vigor of the nation's electric utilities.

When YOU "go electric", your investment is dependent upon the reliability of your electric heat manufacturer. Choose him carefully—he is your insurance in a field of heating new to you!

MARKEL was founded in 1920 and has produced electric heating since 1923. We are the world's largest manufacturer of residential portable and built-in electric heating equipment!

MARKEL Electric Products, Inc.

The World's Largest Manufacturer of Residential Electrical Heating Units

FOUNDED 1920

BUFFALO 3, N. Y.

In Canada: Markel Electric Products, Ltd., Fort Erie, Ont.

From a small beginning, we have grown to an AAA-1 rating, over 300,000 square feet . . . and have over 1,000,000 built-in units operating in homes today.

Behind this is our know-how, our experience by performance, and a nationwide network of electrical supply distributors to provide the service so essential to you. MARKEL'S 27 years in electric heating is YOUR INSURANCE of fine equipment, prompt supply and back-up service.

The MARKEL Engineering Department is available for consultation and counsel on every electric heating problem . . . Send us your plans —write us your problems.

In 1960, we are presenting our Builder's GOLD MEDALLION Home Introductory Offer on Markel Electric Heating! Write us for details.

See MARKEL at the NAHB Show Booth 911 . . . Chicago Coliseum

in America's biggest industry...

ALMOST EVERYBODY

reads **House & Home**

For example: the builders of more houses than read any builder magazine. Says Builder Tom Coogan, past president of the National Association of Home Builders: "I don't see how any intelligent builder can afford to be without HOUSE & HOME."

Also: more house architects, more realtors, more lenders, more appraisers, more dealers and distributors, more government officials, more prefabricators regularly read HOUSE & HOME.

PUBLISHED BY TIME INC.

Now! Heat a Six Room Home With Electric Hot Water Heat for \$19.50 a Month*

* Based on 8-month Heating Season. Statistics available on request.



New Hot-Water Electric Heating Invention Quickly Installed—Requires No Pipes or Ducts

Costs fraction of hot-water—you just set individual baseboards where needed in an instant—and connect to electric line with thermostat. Never requires refilling or attention—anti-freeze protected—absolutely silent operation.

Saves up to 40% on electric bills by hot-water holding its heat and providing heat exactly when needed and exactly where needed—without wasting money due to overheated ceilings or cold, drafty floors.

Eliminates expensive chimneys, ducts, roughing in, as well as mess of furnaces and fuel lines—write today for details on why builders all over the nation are finding surprising preference for this clean, comfortable and absolutely safe hot-water heat by electricity—at low cost—for their homes.

INTERNATIONAL ELECTRIC HEAT DIVISION, 3800 PARK AVE., ST. LOUIS 10, MO. *
Rush FREE Brochure with details on your Hot-Water Electric Heat that requires no plumbing.
NAME _____
ADDRESS _____



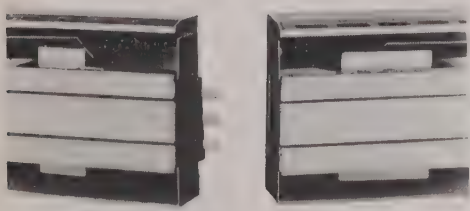
So Safe!

**Meier Tandem 500
Baseboard Heaters
Won't Burn or Scorch**

Build with modern electric heat—quiet, safe, clean, low wattage baseboard units, whose 113° surface temperature won't even harm the tender hands of a child. Beautifully designed . . . and Meier "plus value" engineered to heat economically.

**SO EASY
TO INSTALL**

**Wire Only One Unit—
Plug in the Rest**

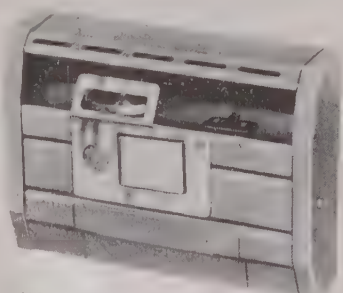


UNITS
PLUG
TOGETHER

You save time, money and labor installing Meier Tandem 500 baseboard heating units. Wire only to the thermostat—or starter section. Plug in as many as 5 heater sections on either side (of thermostat or starter section) for a total of 10 heaters (5,000 watts) in tandem. One screw at each end of the heater unit secures it permanently to the wall.

**Build your profits
with Meier
Tandem 500**

Tandem 500 assures zoned comfort in every room . . . enhances beauty and sales appeal . . . provides the ultimate in modern living with electric heat. You profit more, when you build with Meier . . . manufacturing quality products since 1904.



YOU NEED
WIRE ONLY THERMOSTAT SECTION

Send Now for Literature

. . . or get it from your Meier Distributor. Tandem 500, high wattage baseboard heaters, automatic wall insert heaters, bathroom heaters, portable heaters, utility heaters, radiators, cable, and many other products in the heating and cooling field are manufactured by Meier Electric.

Meier Electric

3525 EAST WASHINGTON STREET • INDIANAPOLIS 7, INDIANA

**Combines the best features
of modern forced-air and
electrical resistance heating**

**The NEW *Majestic*[®]
ELECTRIC FURNACE**



**Provides HEATING,
COOLING, FILTERING AND HUMIDITY CONTROL
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IDEAL FOR MODERN MULTI-ZONED CONTROL**

Majestic pioneers this truly modern concept in residential heating — a system using dirt-free resistance type electric elements, a quiet, belt-driven blower and an effective filter to deliver circulated, clean air to all parts of the house or to any zone of a multi-zoned home.

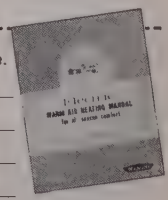
Modulated heat — supplied by one to four banks of resistance elements — is summoned as needed by modern, automatic controls. Simple wiring at time of installation determines desired BTU capacity of each element. No power is wasted — no heat is delivered unnecessarily.

Air conditioning, installed with furnace or added later, is easy to attach to compact, space-saving electric furnace. Humidity control and air purification help make a perfect year-round indoor climate.

Everything considered, it's the best kind of heat for today's better insulated homes. Send coupon for complete literature. See how Majestic's Electric Furnace fits into your custom home planning.

Send "Electric Warm Air Heating Manual for All-Season Comfort" and other literature.

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Company _____
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more realtors
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more government officials
more prefabricators

more
housing
professionals
depend
on

You're in good company when you fill out the coupon below and become a regular reader of HOUSE & HOME.

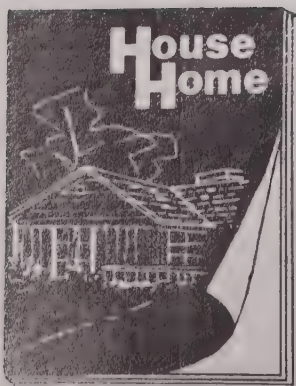
You join over 120,000 other housing professionals who depend on HOUSE & HOME to tell them what's going on—and what's going to happen—in America's *biggest* industry.

Our readers make us the biggest industry monthly in America's biggest industry for just one reason. We cover *everything* about housing, everything from land planning and financing to designing, building and selling. We deliver a complete package on housing. We do not cover merely this phase or that phase of housing.

That's why HOUSE & HOME gives its readers *more editorial pages* every year than any other magazine in the field. This year, we published 1,258 editorial pages. And they are the best-read editorial pages in the housing industry. We always win when surveys ask the housing industry to name its first-choice magazine.

Readership like that leads to leadership of another kind that interests readers. HOUSE & HOME carries *more advertising pages* than any other magazine in the field (1,847 pages in 1959).

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It looks like a good investment ...
**but what will
 the heating cost?**

These brilliantly lighted windows, bright proof of occupancy, could spell plenty of extra cost for heating or air conditioning.

To avoid it, informed architects specify windows with Schlegel weatherstripping — and heating contractors recommend them. Here's how this dense pile weatherstripping helps keep the cost of weather low.

Positive seal. Schlegel woven wool fibre forms a cushiony barrier the prowling winds can't wiggle through. Dust can't sift in or conditioned air seep out. It's Dow-Corning silicone treated, for positive protection against moisture leakage. Because it's wool, it won't swell, bind, or crack.

Permanent protection. Schlegel Woven Pile Weatherstripping lasts. First installations, well over twenty years old, still protect like new. It's designed to last as long as the unit it is used in.

No other material—metal, felt, rubber, or plastic—gives you so many advantages. For a comprehensive list of manufacturers using Schlegel weatherstripping, write for our booklet, "Your Guide to Windows, Doors, Screens."

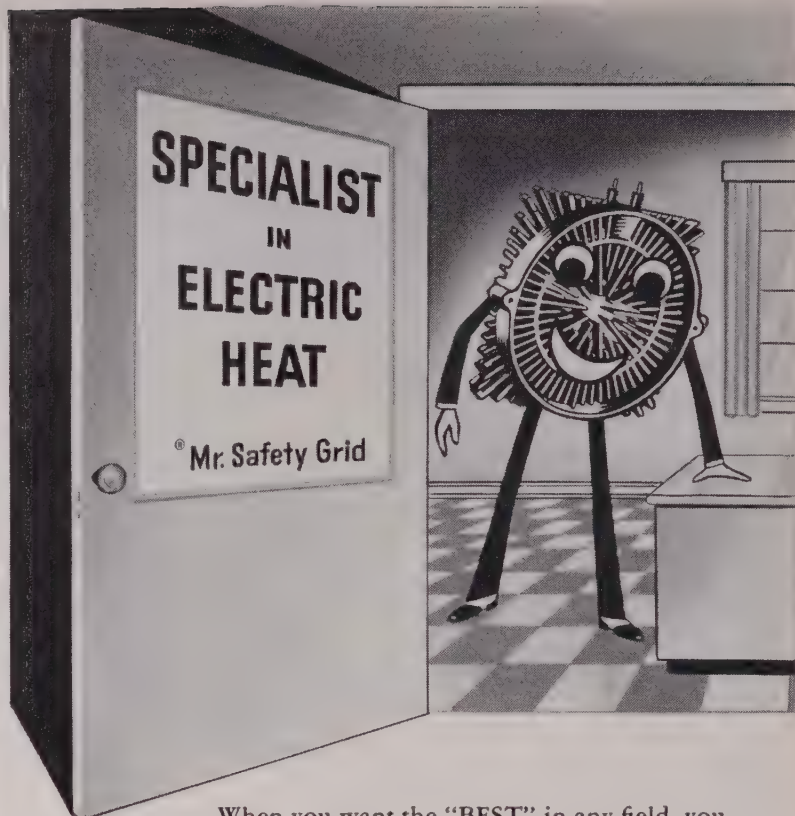
For protection that's *silent, smooth, and sure*



WOVEN PILE WEATHERSTRIPPING

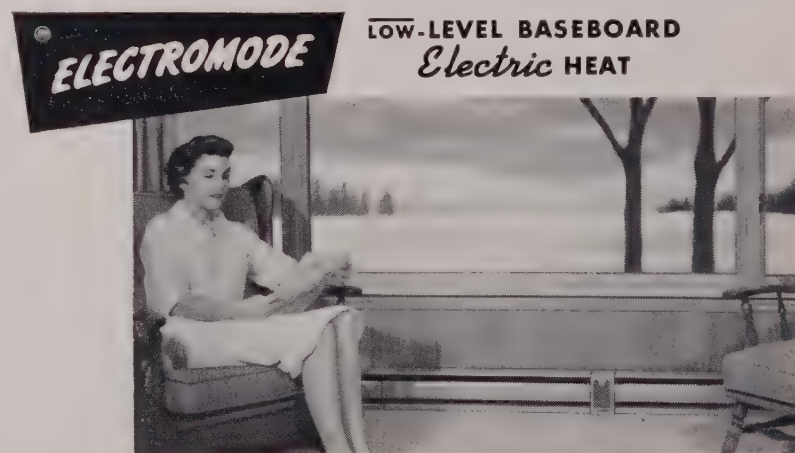
Schlegel Manufacturing Company, P. O. Box 197, Rochester 1, N. Y.

Canada: Oakville, Ontario

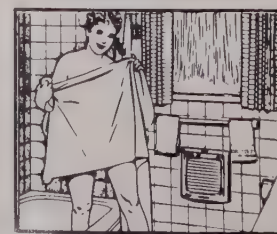


When you want the "BEST" in any field, you go to a Specialist. The Electromode reputation as a Specialist in the Electric Heating Field has been established through their more than 30 years devoted exclusively to the design and production of Electric Space Heating Equipment. For the BEST in Quality, Performance and Appearance, go to Electromode, The Specialist!

Mr. Safety Grid, the Electromode Symbol of Safety, stands for the *safest* in electric heaters. All electric wires are sealed inside this cast-aluminum heating element. No danger of fire, shock or burn. Power shut-off safety switch prevents overheating.



Wall Model for Big Rooms



Bathroom or Small Room Heater

Classically slim Electromode **LOW-LEVEL** Baseboard fits snugly to wall. Ideal for residences, offices, hallways, institutions, and other commercial and industrial uses. Controlled by room thermostats. Rugged steel cabinets are finished in handsome golden bronze, and may be made to blend with tone of walls if desired. Customized fittings impart a pleasing, flowing appearance and permit making an installation which is completely flexible to room size and design.

Complete Electromode Line of Electric Heating Equipment includes: Baseboard Heaters, Wall and Portable Fan-Circulating Heaters, Panel Heaters, Floor Insert Heaters, Duct Heaters, Radiant Cable Heat, Quartzzone Tube Infrared Heaters, Portable and Suspension Industrial Heaters, Milk House and Pump House Heaters.

*REG. U.S. PAT. OFF.

ELECTROMODE Division of COMMERCIAL CONTROLS CORPORATION
 DEPT. HH-59 ROCHESTER 3, N. Y.



"Pre-wired telephone outlets? They're a standard feature of every home we build!"

—SAYS PHIL JONES, CUSTOM BUILDER
OF INDIANAPOLIS, INDIANA

"You're not offering the buyer a really modern home unless you provide for his telephone convenience," says builder Phil Jones. "That means giving him built-in, pre-wired telephone outlets in key areas of his home, just as you give him pre-wired electrical outlets."

Phil Jones builds custom homes priced from \$21,000 up, and every one has from three to five outlets for telephone service. "I let the buyer tell *me* where he wants them located," he says. "After all, *he's* going to use them."

"Pre-wiring makes good sense. People like the idea—and I use it as a solid, competitive sales advantage."

* * *

Your local Telephone Business Office will gladly help you with telephone planning for your homes. For details on home telephone installations, see Sweet's Light Construction File 8i/Be. For commercial installations, Sweet's Architectural File, 32a/Be.

BELL TELEPHONE SYSTEM



At left, Phil Jones and telephone company man Bob Hill discuss outlet locations. Below is one of the builder's handsome "Johnson Meadows" homes.



Metallic effects at low cost; fashionable; for every room— Armstrong Excelon Tile

Shimmering metallic accents are what most women look for in today's modern floors—especially when used in living, dining, and sleeping areas. The Metallic Series in popular Armstrong Excelon (vinyl-asbestos) Tile enables you to give your model home this striking new look for as little as 35¢ a sq. ft. installed. Prospective buyers will see in every room just the flooring features they've been looking for: distinctive colors and designs, easy care advantages, economy, and the best-known brand name in floors.

Easy care is an advantage to you, the builder, too; Excelon's practicality and toughness reduce your problem of keeping your model homes spick and span. No matter what the weather, Excelon can be damp-mopped to its original shine quickly and easily . . .

colors stay clear and bright as new even under the heaviest traffic.

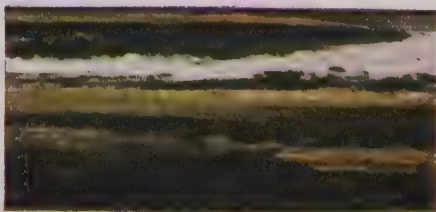
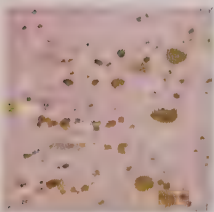
Here is the basic data which proves Excelon is perfectly suited for every room:

recommended uses: above, on, below grade; *gauges:* 1/8", 3/32", and 1/16"; *approximate price per sq. ft. installed over concrete:* 35–60¢; *composition:* vinyl with asbestos fillers; *grease and alkali resistance:* excellent; *designs:* Corkstyle, Spatter, Metallics, Wood-tones, straight grain, burl grain, terrazzo effect; *colors:* over 70.

For expert flooring advice, contact the Architectural-Builder Consultant at your Armstrong District Office. He can provide you with a complete selection of sales helps to make the most of the Armstrong floors you feature. Because Armstrong makes all types of resilient floors, he can recommend without bias the one floor best suited to each job. Call him or write to Armstrong Cork Co., 1612 Sixth St., Lancaster, Penna.



The glittering golden accents of the Metallic Series in Armstrong Excelon Tile add a rich elegance to this modern family room. Its durability and stain resistance make the floor extremely appealing to home purchasers. In the room below, the floor is 9" x 9" Excelon Tile: 352 Ivory Gold and 353 Redwood Gold in 27" blocks framed with feature strips in 795 Plain Brown. At far left, 303 Pink Gold. Left, 351 Black Gold in full size. A complete description of the room with construction and decorating facts is available from your local Armstrong Architectural-Builder Consultant.



TO KNOW ABOUT VINYL FLOORS

Armstrong floors in every room add distinctive sales interest to \$50,000 Druid Hills model home in Ft. Worth.

Howard Patterson—one of Ft. Worth's leading builders—featured Armstrong Vinyl Sheet Floors in his model home and profited by their practicality and elegance. Besides providing unbeatable ease of maintenance in the model home itself, the floors brought immediately favorable responses from prospects. They especially commented on the rich, deep metallic accents in Futuresq, the subtle mosaic-like effects of new Tessera. (The quiet elegance of the Tessera Series in Armstrong Vinyl Corlon is shown in this lovely living room.) Mr. Patterson was also aided by suggestions conceived by Armstrong—among which was a full-page ad, run in the local paper which stimulated his sales.



All-resilient-floor model home in Philadelphia impresses prospects as being progressive step in home building.

In one month, builders Gelman and Curcillo attracted 25,000 prospects, sold over 375 homes in their new Morrell Park development. Smart promoting as well as the distinctive all-resilient-floor model produced the results. Custom color schemes and floor designs were created for the home by the Armstrong Bureau of Interior Decoration. The builders handed out hard-selling brochures—especially prepared by Armstrong. Such services are typical of the way Armstrong can help you sell. Note: the local FHA Office "loans" \$200 additional on the \$10,990 Morrell Homes in recognition of the greater saleability and quality contributed by resilient floors in every room.



In agreement: left to right, T. E. Lewis, Armstrong ABC Man, builders Leonard Gelman and Paul Curcillo; and David Sharp, of Reinhart, Inc., the builders' flooring contractor, concur on use of Armstrong floors.

Armstrong FLOORS

SHEET VINYL CORLON • LINOLEUM • EXCELON (Vinyl-Asbestos) TILE • CUSTOM CORLON and OPALESQ (Homogeneous Vinyl) TILES • LINOTILE • RUBBER TILE • CORK TILE • CUSTOM VINYL CORK TILE • ASPHALT TILE

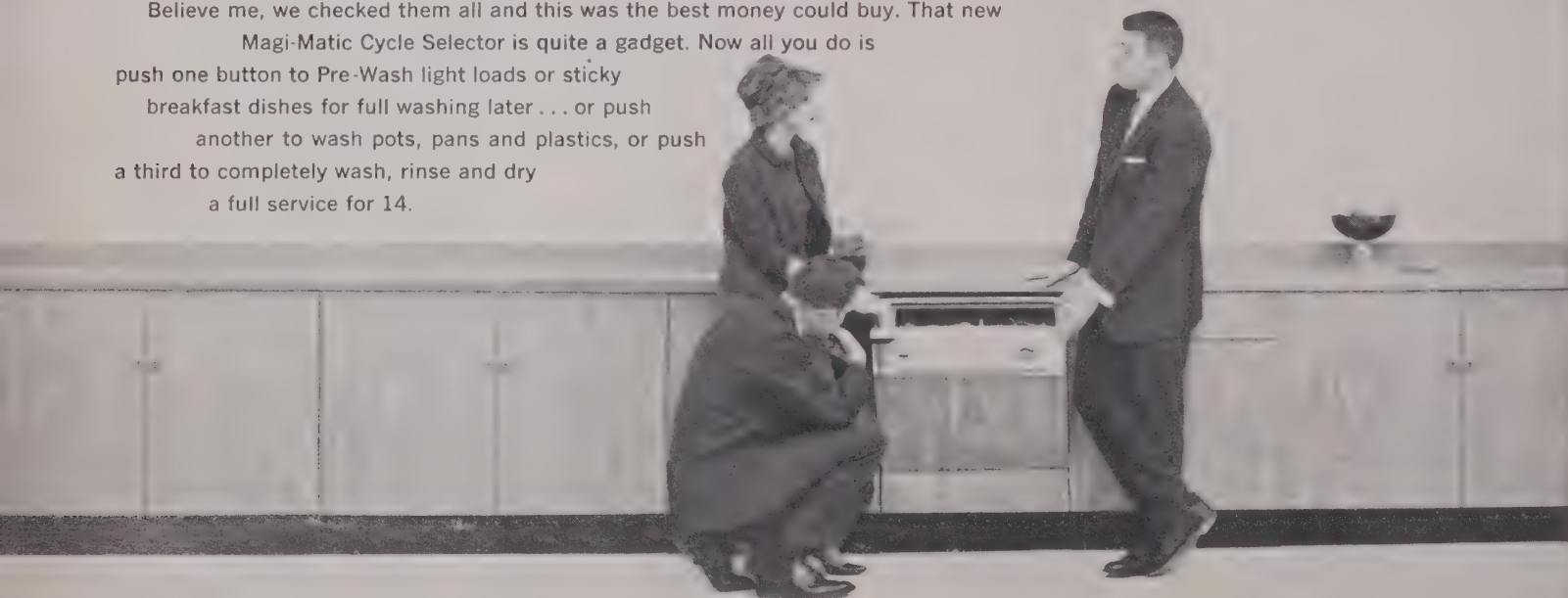
Looks like this kitchen is a real "wife saver".
Let's take the "cook's tour".



Yes, Ma'am, you're just like most ladies . . . First thing that catches your eye is that WASTE KING automatic dishwasher.

Believe me, we checked them all and this was the best money could buy. That new

Magi-Matic Cycle Selector is quite a gadget. Now all you do is
push one button to Pre-Wash light loads or sticky
breakfast dishes for full washing later . . . or push
another to wash pots, pans and plastics, or push
a third to completely wash, rinse and dry
a full service for 14.



Like the super-quiet, super-fast garbage disposer . . . it's another
famous

WASTE KING appliance.

Famous because 33 million men
and women are reading about
WASTE KING in Living, House
Beautiful, American Home, and
House & Garden. For full facts on
the Magi-Matic and all other
traffic-stopping WASTE KING
appliances, write to:



WASTE KING CORPORATION

3300 E. 50th Street
Los Angeles 58, Calif.





FLOOR: 5722 Romatex Wedgewood Blue $4\frac{1}{4}'' \times 4\frac{1}{4}''$ Plate No. 1064
 OVEN WALL: Orsan Red Brickettes $2\frac{1}{2}'' \times 8''$
 COUNTER: 4722 Spartex Wedgewood Blue $1'' \times 1''$

How to turn a kitchen into a sale

Start with a design for easy living. Add a pinch of imagination and a measure of tastefully selected ceramic tile. Mix well. Result: A kitchen so exciting...so attractive...so practical you'll have trouble getting prospects out of this all-important room. Expensive? A few dollars more, perhaps, than substitute materials—but what a difference in helping to clinch sales. Whether the homes you build are of traditional or contemporary design, Romany-Spartan's complete ceramic tile line offers endless possibilities for the creation of new, colorful, more attractive interiors—not just in the kitchen, but throughout the house. For planning help, consult your Romany-Spartan tile contractor. United States Ceramic Tile Company, Dept. W-17, Canton 2, Ohio.



Genuine Clay Tile



SEE OUR EXHIBIT
 BOOTH NO'S. 230-231

UNITED STATES CERAMIC TILE COMPANY • THE SPARTA CERAMIC COMPANY
 MEMBERS: TILE COUNCIL OF AMERICA

another first from **Bilt-Well**
by **Caradco**

The **SUPER THREE**...one basic double-hung window in 3 price ranges

BILT-WELL
Super-hold
double-hung unit
with ingenious sash-
holding device

BILT-WELL
Super-lift
double-hung unit
with flat overhead
balance

BILT-WELL
Super-therm
double-hung unit
with double
insulating glass



Designed with the builder in mind. One basic window in three models. Each has its own major selling feature. Engineered right for every home you build. All far above minimum standards for weather tightness to provide maximum fuel savings. Easy to install. Save labor costs. Make the homes you build more readily salable.

The BILT-WELL Line of Building Woodwork - Windows, Double-hung, Awning, Casement, Basement, CABINETS, Kitchen, Multi-use, Wardrobe, Storage, Radio, Library, DOORS, Exterior, Interior, Screen and Combination.

Manufactured by **CARADCO, Inc.** Dubuque, Iowa

Look at all these BILT-WELL features:

1. Unitized construction with integral sill.
2. Patented BILT-WELL jamb liner of 8 mil anodized aluminum.
3. Anodized aluminum weather stripping.
4. New jamb adjuster that eliminates blocking.
5. Top quality Ponderosa pine, water-repellent treated frames.
6. Standardized for all types of construction.

See us at the NAHB Show, Booth No. 558-60, Hotel Sherman, Chicago, January 17-21, 1960.

There's more to sell with **BILT-WELL**
WOOD WORK

by **Caradco**

Can you use quarter-inch tubing in a hot-water heating system?

Yes, says the Institute of Boiler & Radiator Manufacturers. And it can cut in half the installed cost of risers and returns without any loss in heating efficiency.

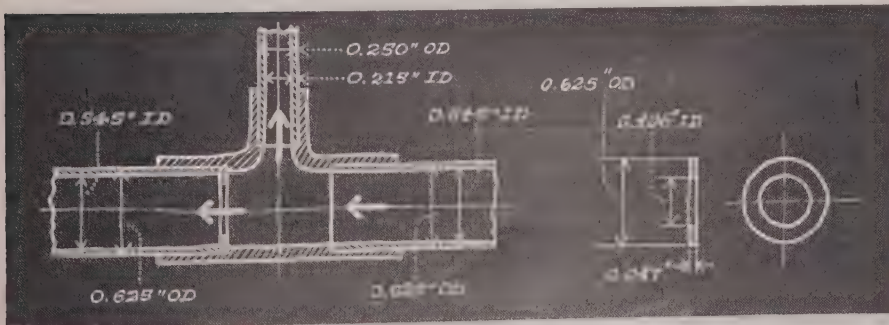
IBRM came up with that answer after using small flexible copper tubing instead of conventional $\frac{3}{4}$ " pipe for risers and returns in a test at Urbana, Ill.

The test, during which outside temperatures dropped to -7°F , was made in a two-story, six-room brick house with a calculated heat loss of 43,300 Btuh. The test house has a one-pipe heating system: a riser at one side of each radiator delivers water from the main, and a return at the other side of the radiator carries water back to the same main.

Why did the small flexible tubing cut costs in the test house? Because 1) the tubing—unlike conventional pipe—needed no fittings where the risers and returns changed direction to get around framing, and 2) tubing was simply threaded through the framing to the radiators (see drawing at left)—so both material and labor costs were lower than in a conventional system.

A small orifice—placed in the main at each riser (see drawing below)—is the key to the test-house system. It creates pressure that forces water up the riser, through the radiator, and down the return. Because of this pressure, water from the main cannot flow up the return.

Branch mains in the test house are $\frac{1}{2}$ " tube. The trunk main is $\frac{3}{4}$ " tube (Type L copper) with sweat fittings. Maximum water velocity is less than 3' a second—low enough to avoid water-flow noise.



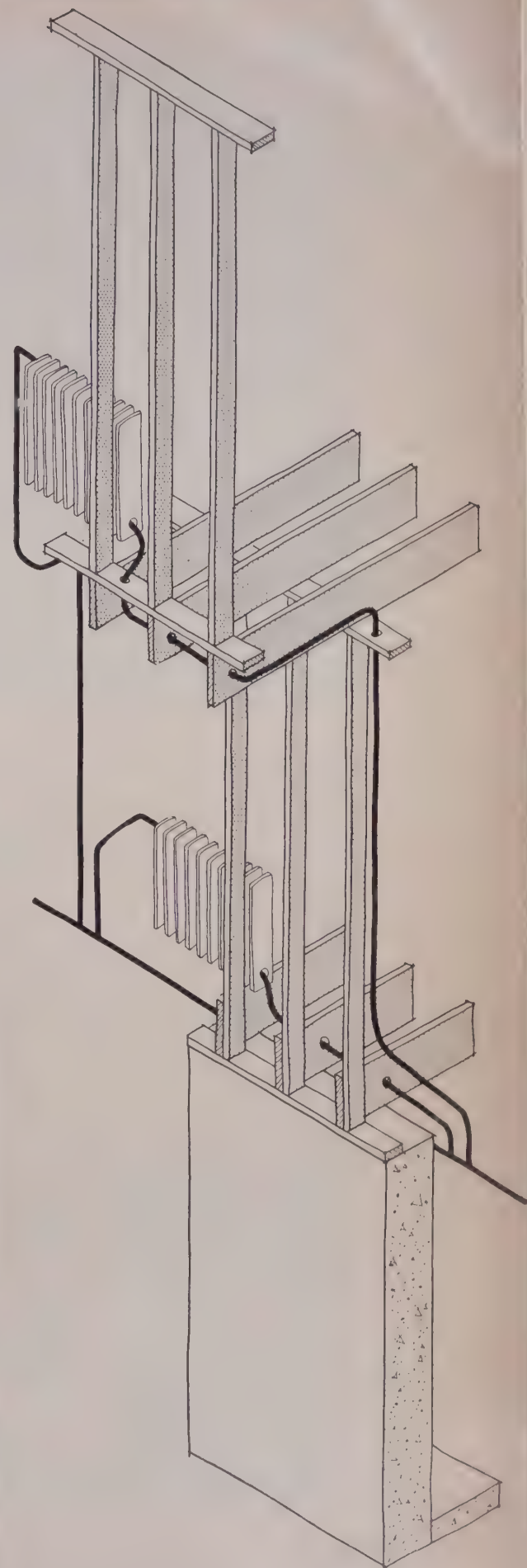
SECTION OF CONNECTION at main and riser shows washer-type orifice, left of T, which forces hot water up through small tube. There is a small pressure drop past the orifice, so water from return lines—under riser pressure—easily flows back into main.

ESTIMATED INSTALLATION COSTS — NEW CONSTRUCTION				
CONVENTIONAL IRON PIPE & SMALL DIAMETER COPPER TUBE			NEW CONSTRUCTION	
ITEM	QUANTITY	COST	QUANTITY	COST
PIPE OR TUBE	341 FT.	\$47.90	323 FT.	\$64.26
FITTINGS	159	56.35	85	23.47
LABOR (\$3.50 PER HR., 60 MIN.)		220.50	24 HRS*	84.00
TOTAL		\$324.75		\$171.73

* ESTIMATED FOR NEW CONSTRUCTION OF FACTORY-BUILT SYSTEM IN HOME RESEARCH HOME

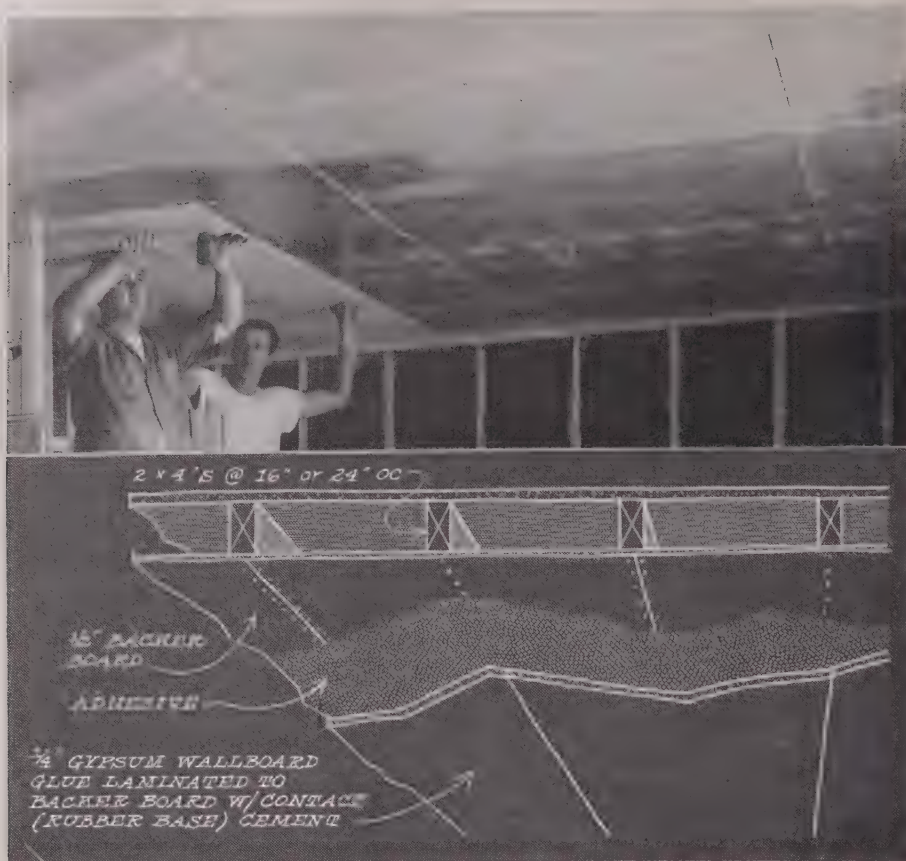
INSTALLATION COSTS show smaller quantities of tube, fittings, and man hours needed with the small diameter system. Estimate is

based on work in the existing IBR test house and involves more fittings and man hours than might be needed in new construction.



WALL SECTION shows how small copper tube can be snaked through framing to radiators, needing fittings only at main and radiator.

Technology continued on p 198



Here's a new two-layer drywall ceiling

In the new system, $\frac{1}{2}$ " drywall is nailed to the framing in the usual way. Then, a second layer of $\frac{1}{4}$ " drywall is glued to this backer.

Result: "A quality ceiling that costs less than a good wet plaster ceiling, but is just as smooth and free of nail pops," says Arthur Kiney, president of Lynwood Development Corp, which is using the system in a 350-unit development of \$35,000 to \$50,000 houses in Wheaton, Ill.

After the $\frac{1}{2}$ " backer layer is nailed

in place, it and the $\frac{1}{4}$ " layer get a roller-applied coat of contact cement (neoprene-base "Vaughan Wall Contact Adhesive," Acorn Adhesives, Chicago). When the cement is tacky to the touch, the $\frac{1}{4}$ " layer is simply lifted into place and immediately makes firm contact. Drywall tape and joint cement (three coats) are used to finish the joints between 4x8 sheets.

The system was developed by member firms of the Gypsum Drywall Contractors International.



Experts from 30 countries talk research

... but no American was on the program at the recent meeting (in Rotterdam) of the International Council for Building Research Study. First application for US membership came from

HHFA. Said an American architect who attended: "What interested me most was the integrated approach Europeans take. Our sociologists don't know what our architects are doing—and vice versa."

Technology briefs

Can soft woods be modified to perform like hard wood?

Research engineers for the Denver & Rio Grande Western Railway think so. Their preliminary studies indicate that it is theoretically possible to use chemicals and gamma radiation to induce polymerization (the linkage of fibers or molecules) of the fibers of soft woods—and get the equivalent toughness and strength of hard woods.

Tests show new plastic film is extra tough and durable

The new film, developed by Dupont and called polyvinyl fluoride, can withstand sunlight and weather over 30 times as long as ordinary polyethylene film. The new polyvinyl fluoride film is a translucent material like polyethylene; could be used as protective surfacing in laminations, or simply tacked to other materials for protection. It could be used for temporary field storage cover, storm windows, or equipment protection, for example.

Efficient thermo-electric heating and cooling comes a step closer

Two experimental projects—one by the Navy and one by the American Gas Assn—may bring thermo-electric heating/cooling closer to practical application in housing.

Thermo-electric systems—which have no moving parts—are based on the principle that electricity passed through two dissimilar metal or semi-conductor plates causes one of the plates to get hot, the other plate to get cold. For full details, see H&H, Sept '58, p 164.

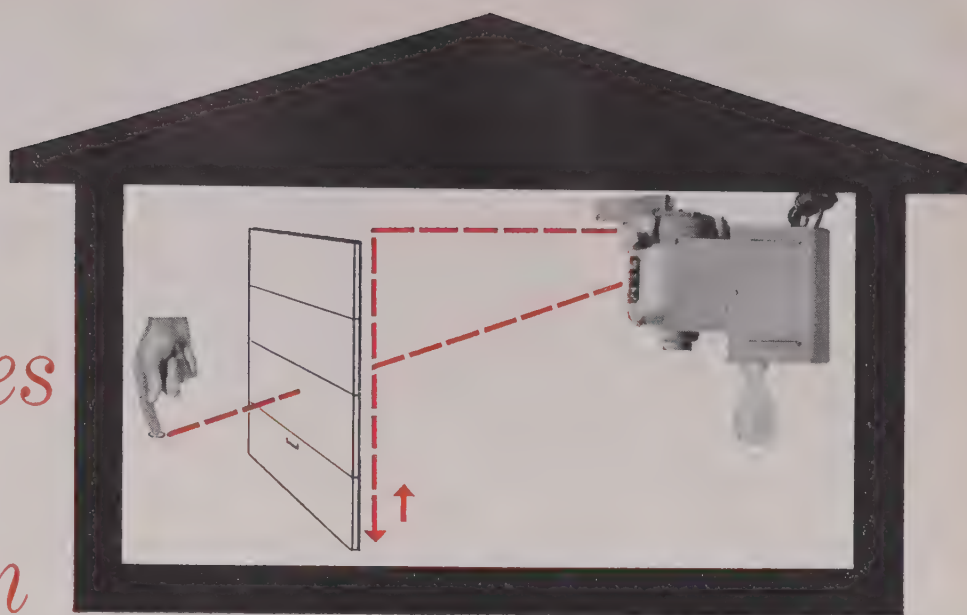
The Navy has awarded contracts to RCA for the development of thermo-electric cooling systems for submarines. The heat collected by the cold plates inside the sub (and the heat generated in the hot plates) will be dissipated through a sea-water cooling system.

The American Gas Assn has just completed an experimental forced-air furnace which uses the thermo-electric principle in reverse—to generate electricity. Heat from the furnace is used to generate enough electricity to run the fan which forces warm air through the ducts.

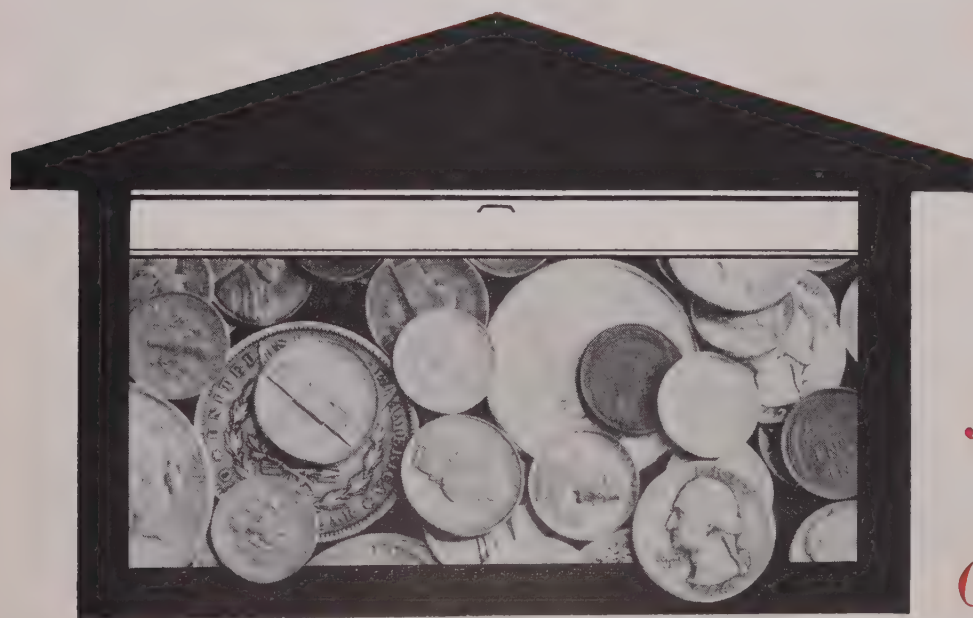
Steel pilings permit building on steep sites subject to landslides

Portland (Ore.) Builder H. C. Nachand is building atop steel-piling foundations driven to bedrock or "refusal." According to Nachand, the pilings not only provide protection for the house in the event of landslides; they minimize the danger of landslides occurring. Reason: the pilings do not disturb the natural grade, drainage, and vegetation, as a masonry foundation would. But, he points out, test borings must be made to check for stable material at a reasonable depth. /END

*make
your
garages
truly
modern*



Delco-matically...



*and
make
more
profit
from
every
one!*

**DELCO
PRODUCTS**

Division of General Motors
Dept. H&H-129, Dayton 1, Ohio

Please send more information on Delco-matic Garage Door Operators.

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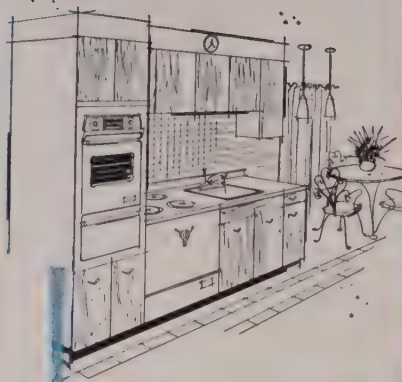
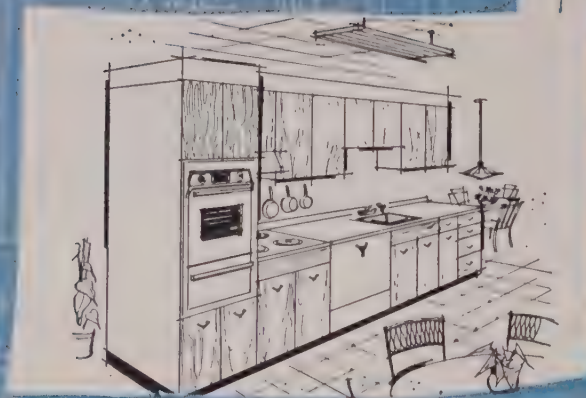
"Thar's new gold in them thar deals" . . . and you'll sell more homes faster by featuring the most modern built-in convenience on the market: the all-new, all-transistor Delco-matic Garage Door Operator! Three and one-half years of testing—including a nationwide 500-home use-test—thoroughly demonstrated the all-condition efficiency of the Delco-matic to the satisfaction of General Motors' electronics specialists, the same experts who design and develop transistors for missiles, computers and pocket-portable radios. See for yourself what Delco-matic can do for your profits. Clip the coupon or call your local Delco-matic representative today for full details.

Delco-matic Garage Door Operators are sold and installed by Crawford Door Company and authorized Delco-matic distributors. Warranted and serviced by United Motors Service electronics service dealers.



Delco-matic / **DELCO PRODUCTS**

save
money
on
building
plans
with



"Packaged Kitchens" by Youngstown Kitchens

You'll be amazed how much better kitchens you can build ...how much more value you can offer in your model home ...if you let us "package" a kitchen for you. Experts, with years of experience in the building business, are waiting now at your distributors to work from your plans, rough sketches or budget specifications. They'll create a quality kitchen with every feature to help you sell your homes. "Packages" can be prepared almost over-

night from the world's largest selection of kitchen components...wall and base cabinets of every size, sinks, built-in cooking units, dishwashers, counter tops, food waste disposers and accessories. Styles include new mar and stain-resistant laminates from our Woodcharm line as well as popular all-steel kitchens. Contact your Youngstown Kitchens Distributor now and ask to see the new book of "Packaged Kitchen" suggestions:



Be sure to see Youngstown Kitchens new mar-resistant laminates.

AMERICAN-Standard

YOUNGSTOWN KITCHENS DIVISION

American-Standard, Youngstown Kitchens Div.,
Builder Dept. HH-129, Warren, Ohio.
Please send me full details on your "Packaged Kitchen" plans for
builders.

Name

Firm Name

Address

City State



What the leaders are doing

ENTRY COURT is between garage (left) and glass wall of family room. Front door is right background of photo.

Good way to give impact to the entry: make it part of a garden court

That's what Strauss Brothers, Lincoln, Neb., are doing with all the houses they are building in Lincoln, Omaha, and Denver.

"Public acceptance of the entry court has been excellent," says Jim Strauss. "We introduced the idea in Lincoln and sold five \$28,000 houses in less than three weeks. So we decided to use entry courts with our newest models in Denver (price range: \$22,000 to \$26,000) and with houses priced as low as \$16,000 in Omaha." For plans of three of the new Denver models, see below.

People like the entry court because it screens the front door from the street. And anyone who steps into the court or sees it from inside the houses is delighted by the play of sunlight and shadow through the room opening.

Entry courts are easy to build

Says Strauss: "Once you've put a slab down for a garage, you can go a little farther at a little extra cost and put down a slab for a court. An entry court costs us less than a covered front porch—and it has much more appeal today."

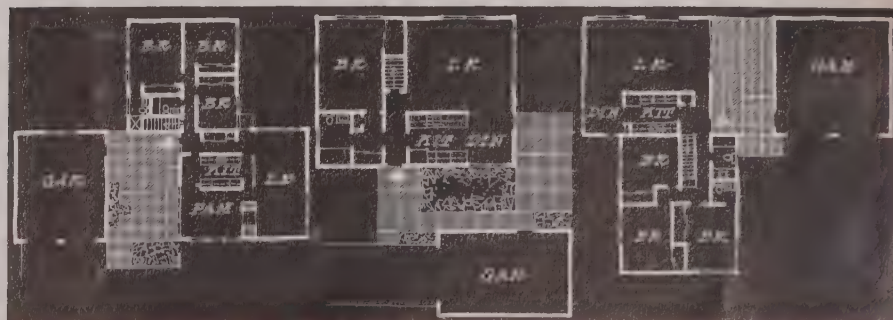
What the leaders are doing

How two Alabama Parades of Homes stirred a sticky market p 202

Small shop helps ten-house builder hold costs at 1954 levels p 204

Here's an easy way to build a low-cost, durable fence p 206

Consumer magazine begins showing buyers what makes a good house ... p 206



THREE ENTRY-COURT LOCATIONS (lightly shaded areas) show how the idea can be adapted to different house plans. The semi-detached garage provides one privacy wall in each case.



1959'S LAST BIG PARADE—in Mobile—had 23 models and ample parking space to handle the big crowds.

Two Alabama Parades of Homes stir a sticky market

Birmingham builders, hit by the steel strike, decided they wouldn't take a stodgy market lying down. And Mobile builders, faced with a glut of low-priced houses (H&H, Oct, *News*), decided they had to promote medium and higher priced homes. As a result, the public in both towns saw:

1. More Parade houses than they have ever seen before in one place (23 in Mobile, 36 in Birmingham).
2. Biggest brand-name promotion either town had ever witnessed (Birmingham used LIFE's Famous Products promotion).
3. New building products like patterned

concrete block (photo below) and preview products (photo right).

4. Crowd-drawing stunts like TV shows daily from a model house; a giveaway house; tie-in advertising with downtown banks, supply houses, furniture companies, and a grocery chain; Mrs America (photo, below right).

Results: In Birmingham, a general pick-up in high-priced home sales, increased sales in two medium- to high-priced subdivisions, and a 70% sellout of Parade models. In Mobile, huge turnouts but sales results are not yet available as this issue goes to press.



PRODUCT PREVIEW (NuTone's hi-fi), arranged by Birmingham homebuilders, was a top attraction.



MASONRY HOUSE, first to be featured in a Mobile Parade, attracted huge crowds. Grillwork

around patios and on the facade of this concrete-block house created a lot of favorable comment.



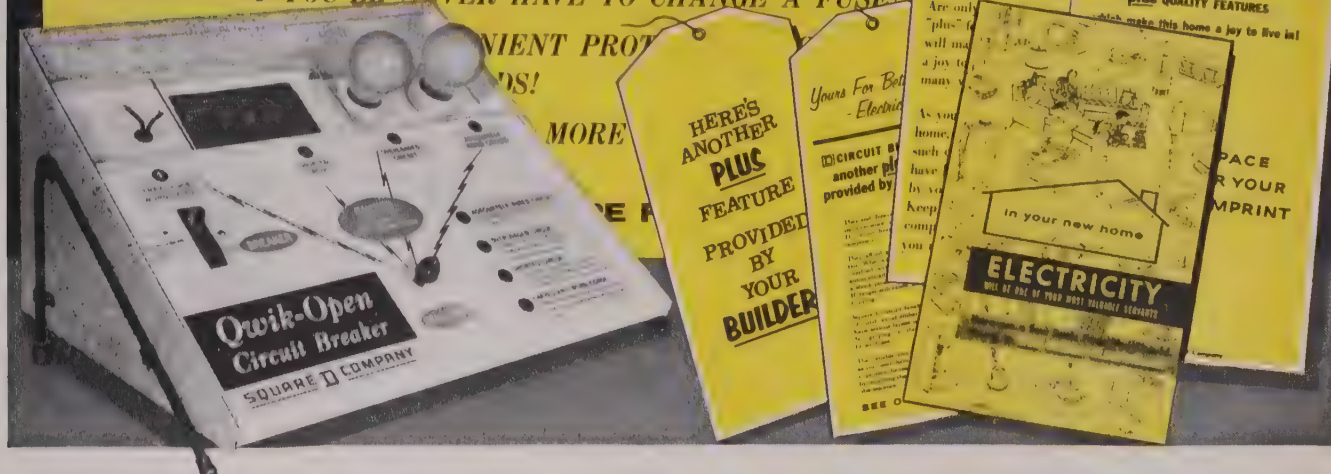
BRAND-NAME PROMOTIONS and Mrs America were featured at each Birmingham builder's model.

continued on p 204

Yours For Better Living - Electrically

**THIS HOME IS EQUIPPED WITH
SQUARE D CIRCUIT BREAKERS**

+ YOU'LL NEVER HAVE TO CHANGE A FUSE!



This simple Circuit Breaker Demonstration will help you sell homes!

There's nothing complicated about it. The demonstration equipment (which we furnish) is light and compact. You can set it up on a moment's notice. There's nothing technical or involved about the demonstration itself. Yet, in a couple of minutes, it dramatizes a very important "plus" value you are providing in your homes. Attractive display cards, tags and literature add further impact to this convincing demonstration.

Today's home buyers are "housepower" conscious. Electrical equipment and appliances now are being provided and promoted as an integral part of the home. It takes adequate wiring to provide for these "built-in" electrical features and others that will be added later on.

When you install **QO** "qwik-open" circuit breakers in your homes, you're providing far more than just adequate wiring. You're providing con-

venience. There are no fuses to replace. Even a child can restore service, quickly and safely.

You're providing modern protection against overloads and "shorts." And you're providing room for extra circuits needed in the future.

You put a proven selling feature to work for you when you install **QO**—finest breaker ever built!

COMPLETE PACKAGE NOW READY
Square D has a "packaged" plan (which includes the demonstration equipment and printed pieces shown above) that helps sell homes. If you're interested, clip this panel, attach it to your letterhead and mail it to S. C. Hunt, Square D Company, 1601 Mercer Road, Lexington, Kentucky.



SQUARE D COMPANY

—wherever electricity is distributed and controlled



This small shop helps a ten-house builder hold costs at 1954 levels

Says Syracuse Builder Raymond Hoyt (above right): "The shop is the main reason why I can now build houses [like the one at right] at the same cost as similar houses that I built five years ago."

Hoyt uses the shop to cut costs six ways:

1. *To cut millwork costs.* He pre-assembles cabinets and prehangs doors.

2. *To cut framing costs.* He precuts studs, rafters, joists, saves by wasting little lumber, getting his angle cuts accurately, and banding exact quantities for each job.

3. *To cut paint priming costs.* He uses a spray gun on kitchen cabinets, siding, and trim to save over \$50 a house.

4. *To cut materials costs.* He can buy in greater quantities and store material safely under roof.

5. *To cut building delays.* When weather doesn't permit outside work, Hoyt moves men into the shop, so they work 12 months of the year.

6. *To cut field labor costs.* His men leave the shop every morning with the proper tools and the correct amounts of material.

Hoyt says he can quickly change over the small (32'x46') shop from one kind of work to another, to keep his schedule smooth.



Scale models, charts, and photos help homeseekers visualize houses

In Portland, Ore., Architects Stewart & Richardson designed a scale model house (left photo) that fits into an attaché case. The roof is removable to show what's inside; the model can be "furnished" with

colored drawings and is held together by transparent plastic. In Seattle, sales agent for Builders Bell & Valdez uses a miniature briefcase with charts and statistics (center photo) to inform buyers about quality.

The wallet-size case was designed by American-Standard. In Palo Alto, Builders Brown & Kaufmann give a colored slide viewer and house photos to buyers. Object: turn buyers into "a second sales force."

continued on p 206

For today's finest homes



Whether Traditional or Contemporary...



Johns-Manville Colorbestos® Sidewalls

provide a look of distinction and make homes easier to sell

Colorbestos sidewalls have a great appeal to home buyers. They provide protection, beauty, long wear and economy. With colors locked in for the life of the sidewall, no paint is needed to preserve them. Colorbestos is fireproof, won't decay or wear out. Upkeep costs are reduced to a minimum. Home buyers get more for their money.

From a builder's viewpoint J-M Colorbestos Sidewalls cut labor costs and time on the job. Colorbestos has dimensional stability. Each unit holds its

shape with no chance of warping, curling or shrinking. Pre-punched nail holes speed application and fewer nails are needed. Since Colorbestos is manufactured with a handsome rib-textured surface in a variety of rich colors, it cuts painting costs and permits houses to be finished faster.



For the full story on different styles, choice of colors and textures, write to: Johns-Manville, Box 111, New York 16, New York.



Ask your J-M representative about the 7-Star and Mrs. America® promotion to help you sell more homes.

© Reg. U. S. Mrs. America, Inc.

JOHNS-MANVILLE

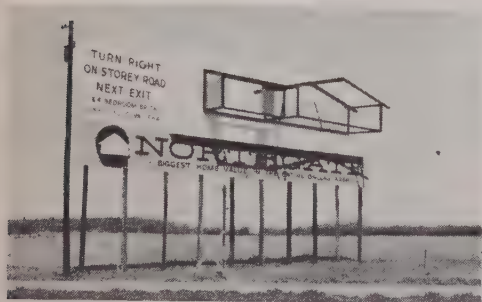




Here's an easy way to build a low-cost, durable fence

Eichler Homes, Palo Alto, provides privacy fences simply by nailing asbestos cement panels to a redwood framework. It needs no paint because both materials resist

weather, and the slate-grey panels are a good contrast to the redwood frame. This fence was designed as part of the house by Architects Jones & Emmons.



Roadside eye-catcher: three-dimensional billboard

On billboards pointing the way to its big Northgate development in Dallas, National Real Estate Development Corp frames out a simple house outline, using dimensioned lumber. Added touch gets a lot of added interest, company officials find.



Extra big markers save time and money

Youngstown (Ohio) Builders Cook & Johnson use white-painted 2x4s or 2x6s as property pins and grade markers. "The usual small markers were forever being knocked down or buried. The big markers save over \$200 a year in engineering costs."



Here is a way to dramatize the strength of a truss roof

Stack five tons of shingles on top of the trusses, suggests Builder Bob Seabury of Wichita Falls, Tex. Then display a sign telling how strong the trusses are: "Glued and nailed truss for roof framing gives your house the strongest roof ever built."

To gain off-site attention for his display, Seabury had 25 employees (total weight: three tons) climb on top, took this picture. It was published in the local newspaper.

Cost cutters and time savers

"Easiest way to lay carpet," says Ed Fischer, Fischer & Frichtel, St Louis, "is to put the shoe molding about $\frac{3}{4}$ " above the floor all around the room, and—after you've cut the carpet to size—tuck it under the molding. Cut the carpet in rectangular shapes—don't run it through doors where you can use an aluminum threshold screwed to the floor. There are three advantages: 1) carpet can be turned for more even wear, 2) carpet can more easily be taken up for cleaning, and 3) you don't need a professional carpet layer to do a competent job."

Space-saving trade secret of one mid-western prefabber: put the FHA-required interior storage in the attic instead of on the ground floor. The space is reached by a pull-down stairway.

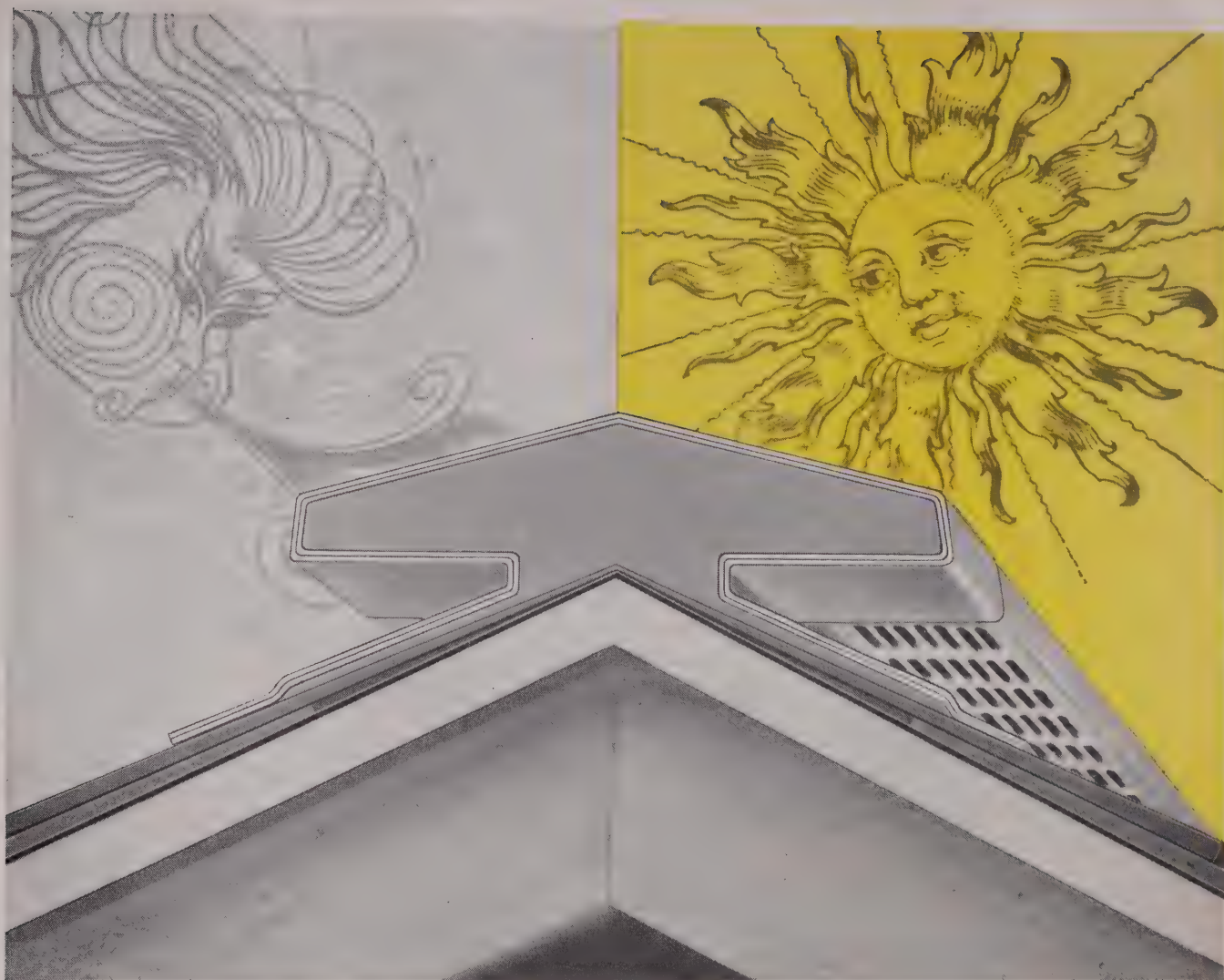
"A crane at the back of your trucks will lower materials handling costs," suggests Prefabber Bob Schleicher, Gary, Ind. He believes one of the greatest building wastes is moving materials by hand. So he equips all his trailers with permanent cranes to unload bulky wall panels and trusses and lumber packages.

Ceiling-high cabinets—which can be used to store turkey-sized broiling pans and all sorts of out-size kitchen equipment—make a lot of sense, says Builder Andy Place of South Bend. But he also includes a stool which can be used by the not-so-tall housewife to reach the high storage area.

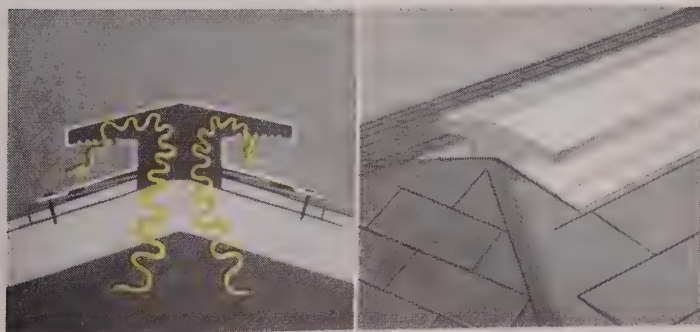
If you haven't read the October and November issues of *American Home* magazine, you better look them up. Reason: the consumer magazine is running a series to educate prospects on what makes a good house. Chances are, many of your prospects will be comparing your houses against the checklists and ideas mentioned in the series.

First article in the series (October issue) covered house orientation, placement of house on lot, and planning. Second article (last month) is titled "How to get custom house features at a ready-built price;" gives high and low prices for a wide range of extras and options. Upcoming: "How to identify the quality-built house," articles on contractual relations between builder and buyer, and trade-ins.

Proven methods of selling real estate and closing a deal are outlined in a new booklet by Malcolm C. Sherman, Boston attorney. Title: *Real Estate Broker's Legal Guide*, printed by Spaulding-Moss Co, Boston; 99 pp; \$3. It is written in layman's language, and its storehouse of guidance material can help brokers work safely and more efficiently. Malcolm Sherman is also the author of *Mortgage & Real Estate Investment Guide*. /END



Olin Aluminum puts year 'round satisfaction into Home Comfort's Vent-a-Ridge



Olin Aluminum guards the efficiency and good looks of Home Comfort's Vent-a-Ridge. For aluminum products that help sell homes, and a list of manufacturers who make them, check with Olin Aluminum.

*Sell new homes faster with
this dynamic new comfort-feature*

Architects and home-builders have long maintained that a continuous vent along the entire ridge of a house would multiply the benefits of attic insulation—summer and winter. Now, from Home Comfort, comes Vent-a-Ridge: first all-aluminum, pre-fabricated ridge vent unit that is economical, attractive, efficient, and suitable for both new construction and re-modeling.

Vent-a-Ridge provides an ideal escape route for summer's hot, humid attic air. And in winter it eliminates damaging condensation and the need for gable vents, dries insulation, cuts heating bills.

Olin Aluminum produces the basic metal that makes low-silhouette Vent-a-Ridge a lifetime investment in non-rusting, stain-stopping ventilation. Let Olin Aluminum, now a major supplier to the building industry, help you add saleability to the homes you build as well.




SEE EDWARD R. MURROW ON "SMALL WORLD"—EVERY SUNDAY EVENING, CBS-TV.

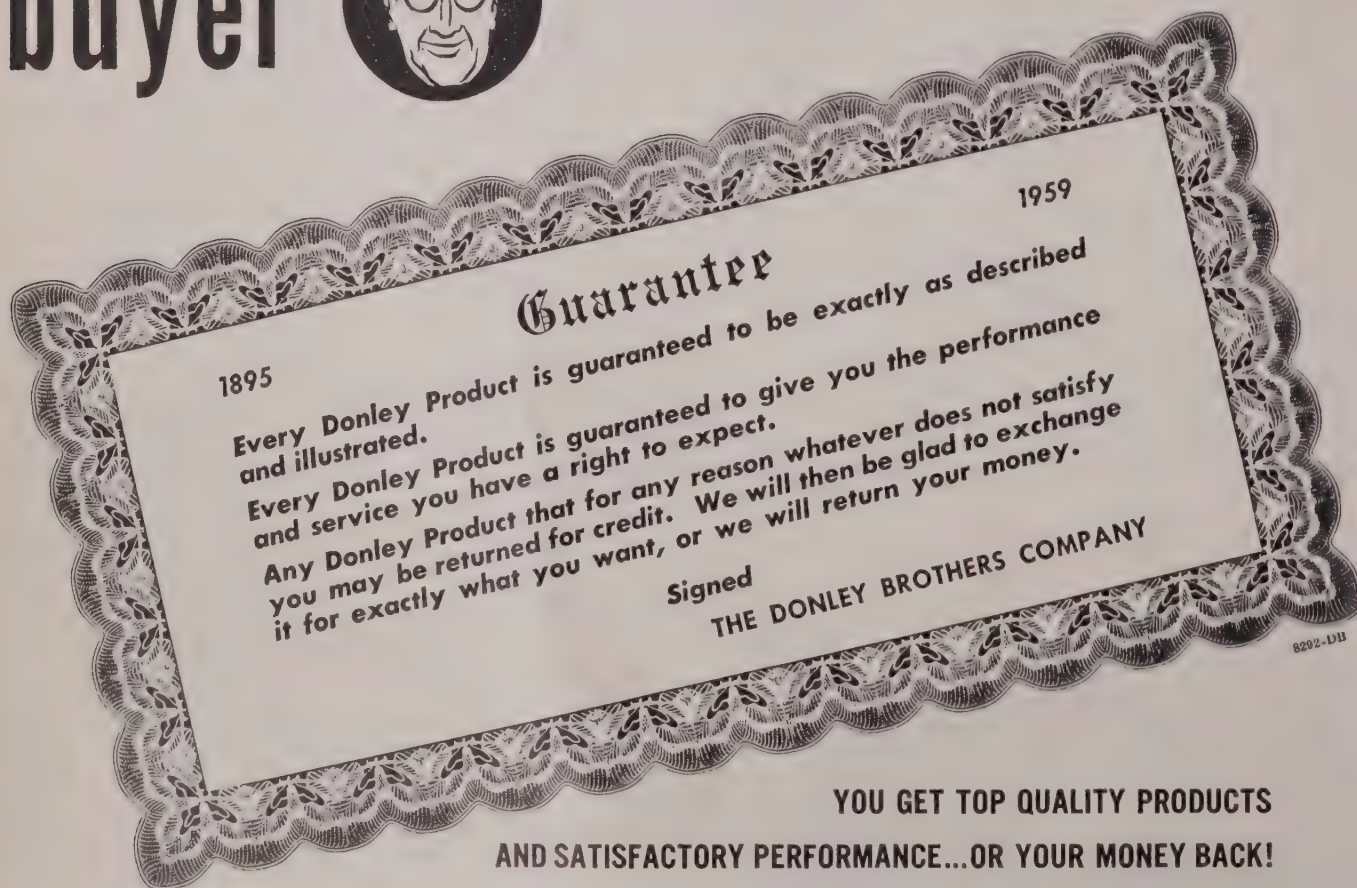


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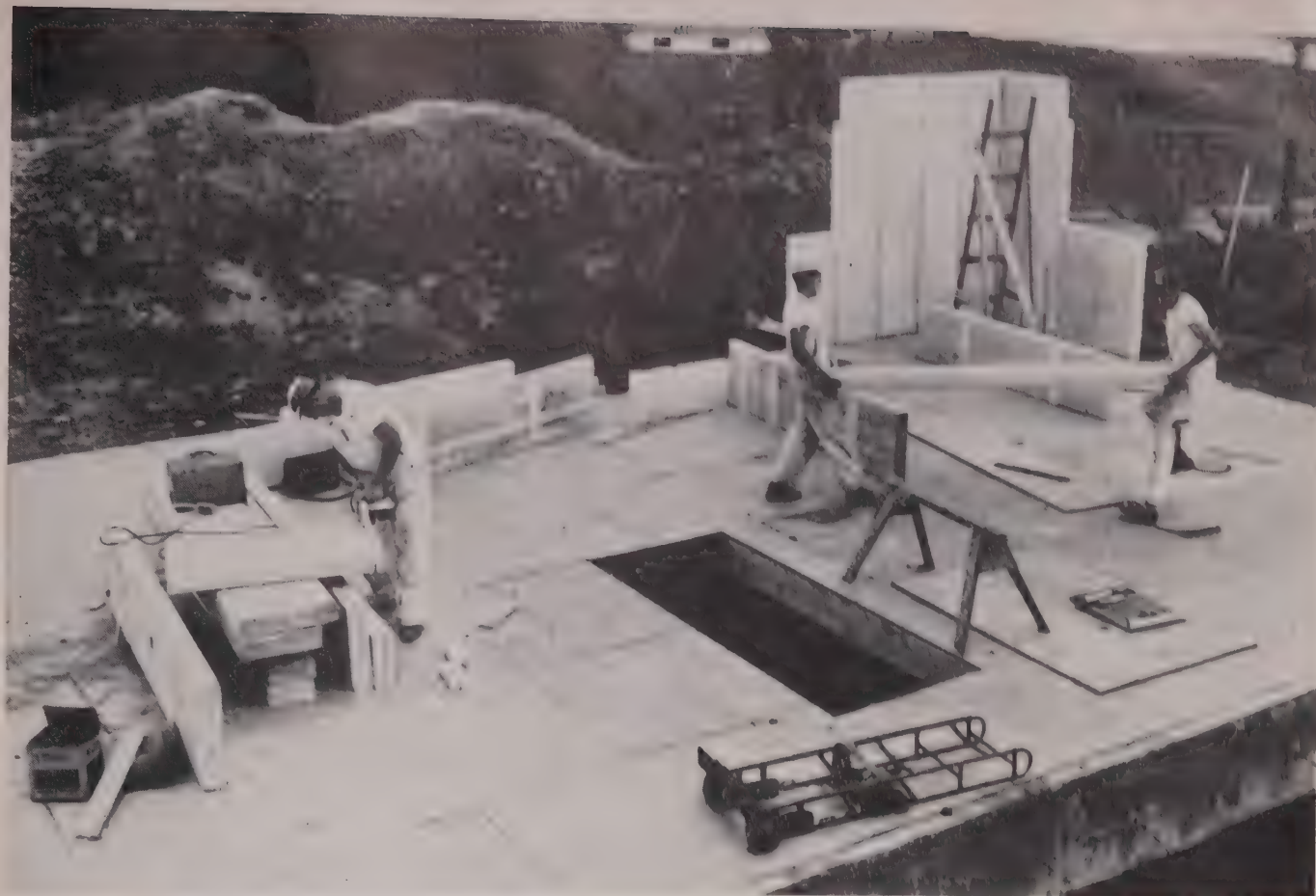
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PANELS weigh about 150 lbs, can be put in place by two men. Calsi-Crete can be worked with carpenter tools

New panel system uses lightweight concrete

Prefab houses are now being made from 20" wide wall-height panels of lightweight concrete.

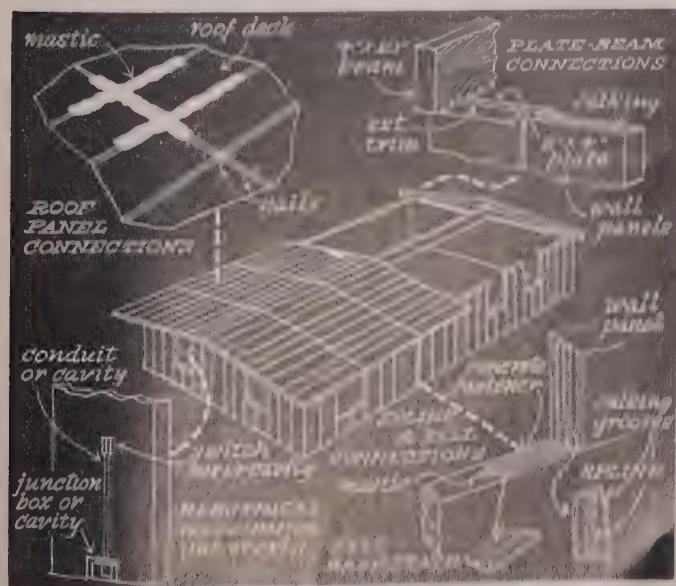
Calsi-Crete panels have the virtues of concrete—they are strong, fireproof, dimensionally stable, resistant to vermin, rot, and fungus. They are also lightweight (34 lb per cu ft), workable, insulating (U factor of .18 to .20), acoustically damping.

Using these panels, three men and a supervisor can close in a house in two days, according to Arthur Benson, general

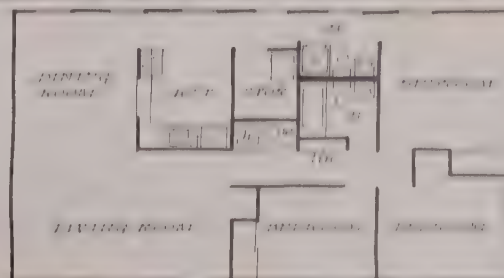
manager of cmc Homes, who is building Calci-Crete houses in Chicago and St. Louis. Costs for the complete house are now about \$9.75 a sq ft but are expected to drop to about \$8 with greater production. Says Benson: "This type of construction costs slightly more than frame but considerably less than brick veneer." Distribution is being limited to 23 central and southern states at present.

Continental Materials Corp., Chicago

For details, check No. 5 on coupon, p. 234

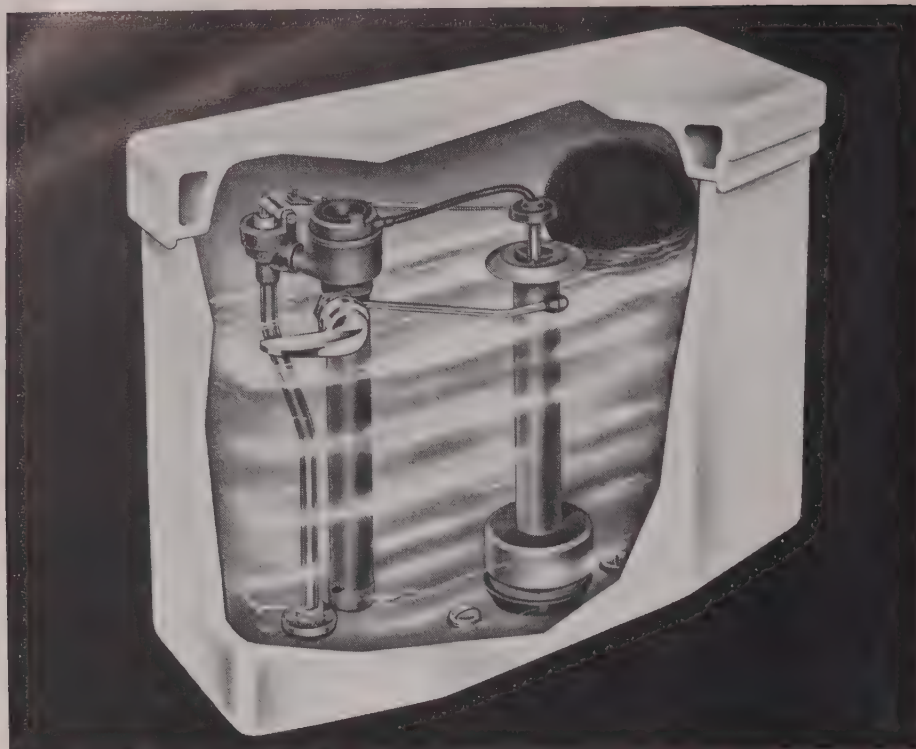


CMC SYSTEM uses 14' x 150 panels for walls and partitions in average house, 14' for roof. All joints are splined and culked, roof joints are sealed with mastic before finish roofing is applied.



TYPICAL PLAN for CMC house in 1,146 sq ft three-bedroom O.I. model. 20" module of system allows flexible wall and partition arrangement. One 1,240 sq ft and two 1,000 sq ft houses are also stock

New Products continued on p. 210



FLUSH-VALVE ACTION is guided over its full length by a self-cleaning plastic tube so the valve face makes a positive seal. Other features: new corrosion-proof water control allows faster, quieter filling; rubber-tipped trip lever works silently.

Here are answers to two old plumbing problems

The dripping faucet and the leaky toilet have been with us since plumbing moved indoors. Now American-Standard has come up with solutions.

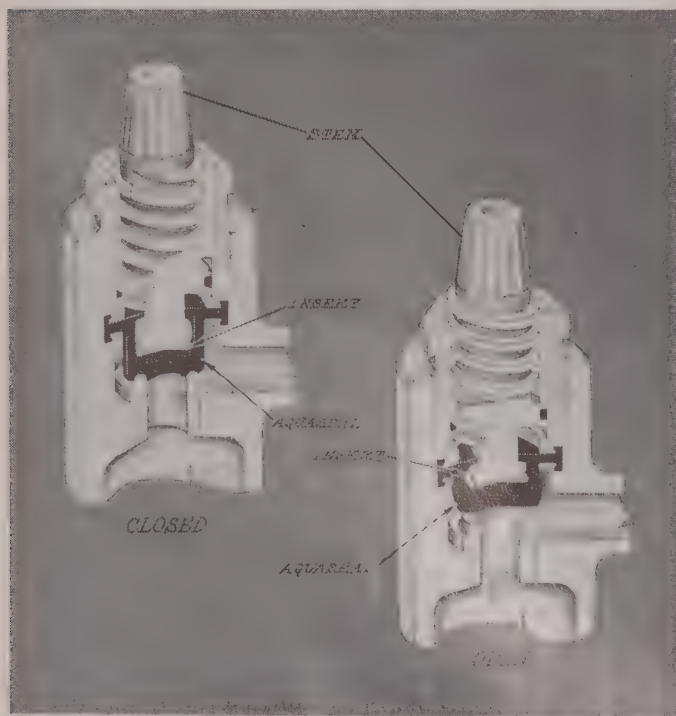
The new fitting for A-S water closets replaces the ball valve and its wire linkages with a new water control, new

flush valve, and new trip lever. All parts are corrosion resistant. All action is positive and stick-free so a water-tight seal is assured.

The new faucet does away with the usual washer. The valve—called Aquaseal—is a non-rotating flexible seal that

is compressed against the seat to stop the flow, retracted to open the faucet. All moving parts are outside the flow area so that no leakage is possible up the faucet stem.

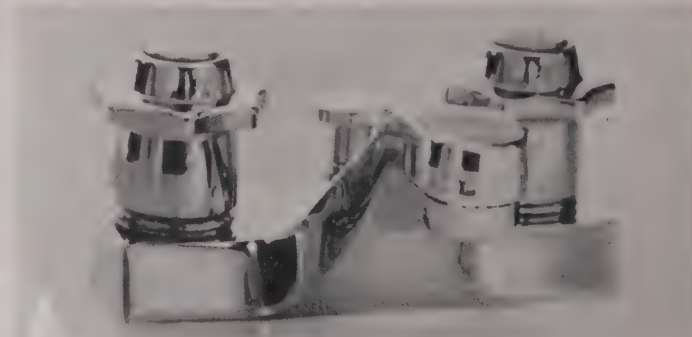
American-Standard, New York City.
For details, check No. 6 on coupon, p 224



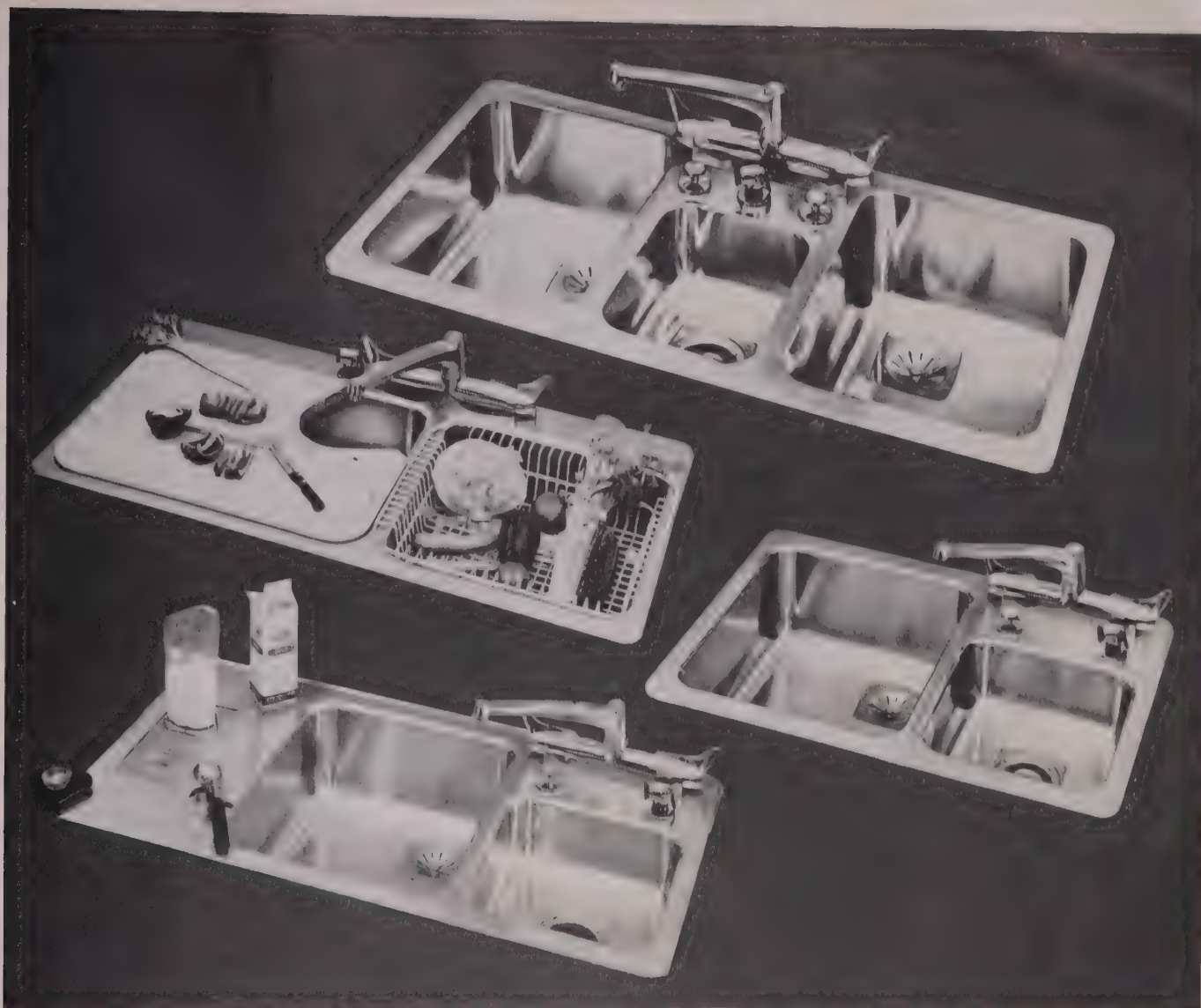
HEART OF LEAKPROOF FAUCET is the Aquaseal—a flexible non-rotating diaphragm. When the faucet is turned, the lower end of the stem turns in a metal insert in the Aquaseal, pushing it down to shut off the flow, pulling it back to open the valve. The screw mechanism is permanently sealed off from the water flow.



COLONY LAVATORY FITTINGS are all brass, have easy-to-grip winged knobs. Chrome-plated valve seat is renewable.



HERITAGE FITTINGS have fluted handles insulated with nylon. This Aquaseal line includes lavatory, bath, shower, and kitchen fittings.



KITCHEN SINKS range from the big unit at the top with two wash bowls and a disposer bowl through various sizes and combinations

of double bowls, some with built-in mixers, cutting boards, vegetable drainers, etc. New long spout faucet is standard on all kitchen sinks.

Here is a line of sinks for all purposes

Elkay's new line ranges from a big triple-bowl "Cuisine Centre" for the kitchen to little one or two bowl entertainment sinks for the bar, den, or recreation room, and oval bowls for the powder room and bath. Several

sinks have built-in NuTone food or drink mixers.

The sinks are all stainless steel. Bowls are flat-bottomed to prevent glasses tipping. Faucets have extra-long splashless spouts. MiraRim gives

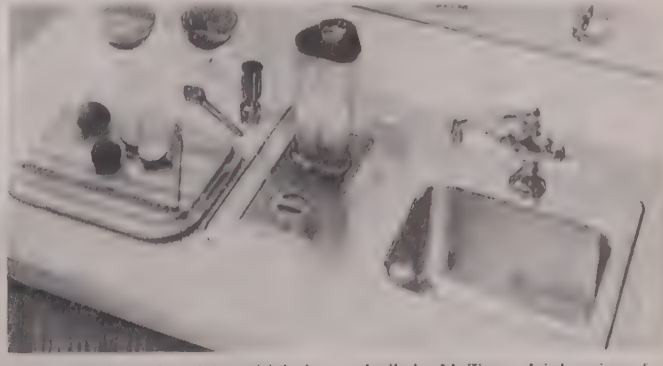
positive seal to countertops. Under surface of all bowls is factory coated to deaden sound. Raymond Loewy Assoc. designed the new line for Elkay.

Elkay Mfg Co, Chicago.

For details, check No. 7 on coupon, p 224



ENTERTAINMENT SINKS include the two-bowl model at the left which has a high spout and ice compartment for drink service and the small



single bowl at the right which has a built-in NuTone drink mixer for making recreation room snacks.

New Products continued on p 212

342 HOLIDAY HOUSE HOMES

SOLD IN 3 YEARS

--and we're starting 1,000 more!



Just three fast-starting years ago, Tom Purvis and Jack York built their first Holiday House home—built it, sold it, and built some more. Today, 342 Holiday House homes later, Purvis and York are launching Stonegate, their next development, to feature Holiday House homes. Here's why these men believe in the Holiday House package:

Tom Purvis: "We save money building Holiday House homes—money on actual construction cost and site labor. We know in advance exactly what material costs will be on each house."

Jack York: "The Holiday House package saves us time we'd spend with architects and material salesmen. I personally save three hours a day—time I can now spend on sales and supervision. The result: our sales and profits are up, our complaints are down."

HOLIDAY HOUSE
MANUFACTURERS CORPORATION

P. O. Box 8097 Fort Worth 12, Texas

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Address _____

Whether you build 25 or 250 houses a year, Holiday House home building can up your profits, too. Find out how—write us now for full particulars.

New products

start on p 209



VERSABORD is stored flat on skids under cover in a dry place.

Now, guaranteed underlayment

Weyerhaeuser has just announced that Versabord—their particle board underlayment, which has had four years of field use—will now carry a performance guarantee. Company asks only that the product be used as shown below (good practice with any underlayment) and that the Weyerhaeuser dealer check the job. With proper installation and normal use, A-A graded Versabord will hold flooring firmly, will not split when nailed, warp or delaminate, or contribute to tile cracking.

Weyerhaeuser Co, Tacoma.

For details, check No. 8 on coupon, p 224



SUBFLOOR should be clean, dry, smooth, and well nailed.



BUILDING PAPER may be used between subfloor and Versabord.



CORNER PANEL is half panel (4'x4') to get properly staggered joints.



PANEL JOINTS make moderate contact; 3/8" space is left at wall.



6D NAILS are spaced 6" oc $\frac{1}{2}$ " from panel edge, 10" oc along joists.



NAIL HEADS are set flush or counter-sunk, dents filled with compound.



FILLED AREAS and panel edges are sanded smooth before tile is laid.



CLEAN SURFACE between flooring and Versabond assures smooth floor.



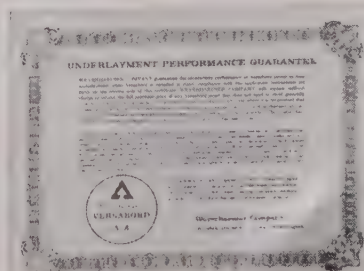
MASTIC is spread with serrated trowel to give continuous glue line.



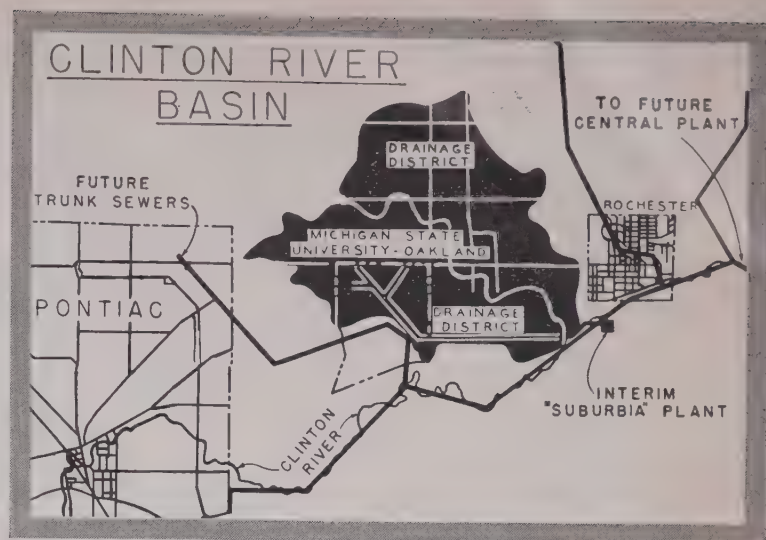
FLOOR TILES are laid with tight joints to meet manufacturer's specs.



FINISHED FLOOR is rolled both directions with a 150-lb roller.



GUARANTEE gives conditions on face, installation rules on back.



Low-cost sewage plant is key to development of Clinton River Valley

In the Clinton River Valley near Pontiac, Michigan, a new town is going up . . . a complete, 700-home community surrounding Michigan State University's new Oakland County campus. Yet, one short year ago, both college and community were termed "impossible."

The reason is one only too familiar to builders: lack of adequate sewage facilities—and not enough money to build a traditional sewage treatment system. Only two factors saved the day . . . Oakland County's determination to *have* that University branch—and the low-cost sewage treatment plant that made it possible.

Three interested groups—the University, County officials, and the developers who wanted to build the new campus community—evolved a "master-plan" which may be the pattern for metropolitan areas all over the nation.

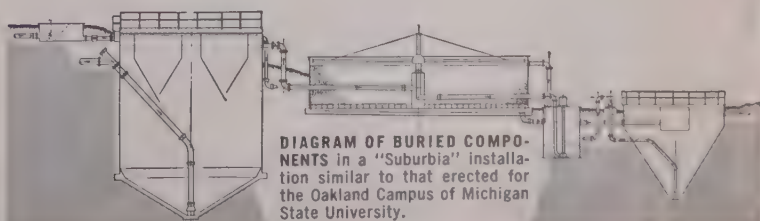
It involves construction of a "Suburbia" sewage treatment plant, together with collection and intercepting sewers of size and location calculated to fit into the County-wide master-plan. "Suburbia's" relatively modest cost made it possible to obtain good private financial backing.

Developers are finding that "Suburbia" can be planned for projects of 100 to as many as 10,000 homes, and can be erected in a surprisingly short time. Individually planned and installed under the direction of their own consulting engineers, the unit conforms to State Health Department requirements.

Best of all, "Suburbia" involves less initial and operating capital than any other type of sewage treatment plant. Perhaps it can help *you*, too, "unlock" new land . . . by providing sewage treatment quickly, efficiently, from a single source of responsibility. For further information, write to . . .

MUNICIPAL SERVICE COMPANY

4625 Roanoke Parkway • Kansas City 12, Missouri





I'll never buy another board!

"Why not? Because I build *Midwest Houses*. They're delivered to my site complete—with no extra lumber to buy. My men can get a Midwest House under roof in a day. And when they're finished, you could put all the scraps in your hat. We stay flexible. We work in any weather. We build and sell more houses. You ought to build Midwest. It's the *profitable* thing to do." Midwest Houses, Inc., Mansfield 5, Ohio.

MIDWEST HOUSES

DON'T BUILD ANOTHER HOUSE until you check into Midwest's complete *Profit-Builder* program: site selection, architectural service, market evaluation, construction and consumer financing, plot planning, time-table expediting, construction coordination, sales promotion, advertising preparation, model home management, Urban Renewal assistance. Over 50 models in a variety of styles, priced from \$10,000 to \$30,000.



WIDE-SIDE PICKUP is lower, roomier, has new V-6 engine.



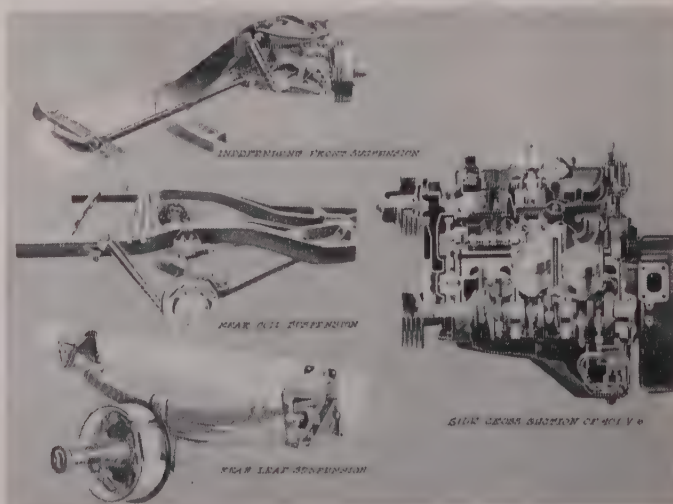
V-4000 STAKE TRUCK is 105" from bumper to back of cab.

GMC trucks show new features

New engines, new suspensions, sturdier frames, and new lightweight cab designs are all found in GMC's 1960 truck line. The engines include high-torque gasoline and diesel V-6's, a gasoline V-12, and gasoline and diesel straight sixes. All trucks have independent torsion-bar front wheel suspensions coupled with rear coil, leaf, or air suspensions. Light-duty models have welded X and drop frames; heavier models have box or L members. Aluminum tilt-cabs have torsion counterbalance. The full line runs from lightweight pickups and vans up to highway rigs of 120,000-lb gvwt.

GMC Trucks, Pontiac, Mich.

For details, check No. 9 on coupon, p 224



NEW FRONT SUSPENSION (top left) is paired with light-duty rear coil springs or heavy-duty variable-rate leaf springs. At right is cutaway of new 60° V-6, designed to give high torque at low speeds.

New Products continued on p 216

Architect: Ward Thomas, A. I. A.

THE STRIKING BEAUTY OF REDWOOD is recognized by the architect as a vital element in the overall design of the interior. Here the rough-sawn, tongue-and-groove siding was left unfinished to reveal all the fascinating detail in the grain patterns and swirls of the natural wood.



*All the wonderful warmth of wood
is best expressed in redwood*



CALIFORNIA REDWOOD ASSOCIATION

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window walls



REUTEN Tru-Bows and Tru-Walls . . . quality wood windows . . . enhance the beauty of homes in any architectural style. The OL Tru-Bow (top picture) fits perfectly in a Modern setting; the OC Tru-Bow (second picture) adds charm to a Colonial house. Four additional styles and over sixty combinations of sizes, pane shapes, and vent positions can be ordered. Both Tru-Bows and Tru-Walls meet custom quality standards and are stocked by regular millwork jobbers.

See our complete catalog in Sweet's A or LC files, our display in the Architects Building, 101 Park Ave., New York City, or write for additional information.



FRED REUTEN INC.
CLOSTER, NEW JERSEY

New products

start on p 209



New wall heater from Westinghouse comes in seven sizes—1000 w to 4000 w—at 240 v. Bellows-actuated thermostat adjusts for 55F to 85F, holds temperature within 2°. New styling includes sloped control panel for easy reading and operating, aluminum-finished grille.

Westinghouse, Pittsburgh.

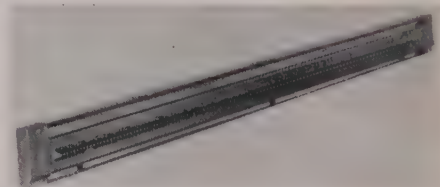
For details, check No. 10 on coupon, p 224



Berko baseboards are protected by small bi-metal thermostats mounted in the top leading edge 20" oc. These 25-amp cut-outs are wired in series with the heating element, will break the circuit any time temperatures rise abnormally.

Berko Electric, Queens Village, N.Y.

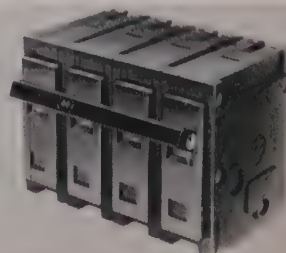
For details, check No. 11 on coupon, p 224



Infra Flo baseboards combine radiant and convected heating through grilled front cover and new aluminum-finned tube. A cool air passage between the core and reflector keeps surface at 110F to 120F. Units come 2' to 12' long, 500 w to 4000 w, in ten standard lengths.

Electro-Ray Mfg Co, Vancouver, Wash.

For details, check No. 12 on coupon, p 224



New Uni-Pak circuit breakers provide three-phase circuit protection for electric heating and air conditioning within a single-phase panel. The third pole is isolated from the stabs and energized by a separate feed from the three-phase source.

Walker Electrical Co, Atlanta.

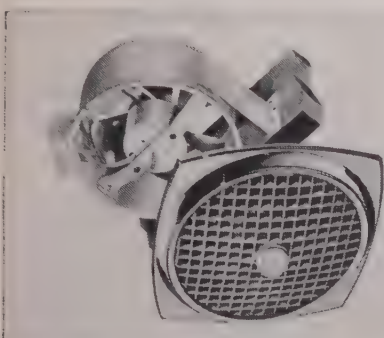
For details, check No. 13 on coupon, p 224



Central ventilating kit will pull air from three locations with one 350 or 500 cfm blower. Package consists of ventilator, ducts, wiring, switches, roof cap, backdraft damper, registers, and grilles. Central unit 15-7/16"x13-3/16"x9-5/16" goes between ceiling joists, can be controlled by three low-voltage switches. Makers claim 2½-hr installation time.

Lan Blower Co, Dayton.

For details, check No. 14 on coupon, p 224



Low-cost vent fan has a high-impact polystyrene grille with 80% free area. Motor is totally enclosed 4-pole unit. Six-bladed aluminum fan delivers 593 cfm. Fan housing will take an 8" duct without a reducer. No framing is needed. Unit installs with only six nails or screws to a single joist (see photo).

Leigh Building Products, Coopersville, Mich.

For details, check No. 15 on coupon, p 224



Gas dryers to match the full line of GE and Hotpoint washers, in styling and colors, give electric appliance dealers an extra sales edge in strong gas areas. Dryers are available through Stiglitz distributors, public utilities, and L.P. gas companies.

Stiglitz Corp, Louisville.

For details, check No. 16 on coupon, p 224

continued on p 218

BEFORE YOU INSTALL ANY FLOORING

Read this about **HARRIS BondWood®**

THESE FEATURES SAVE YOU MONEY!

SOLID HARDWOOD FOR ADHESIVE INSTALLATION—goes down and stays down in exclusive Harris Adhesive Mark 10 over concrete or wood.

GREATER STABILITY—BondWood changes grain direction every 4¼" resulting in a minimum of contraction and expansion.

TIGHTER FIT—Exclusive adhesive and unique construction prevents shifting—makes BondWood the most stable parquet ever designed.

ELIMINATION OF SQUEAKS—BondWood is solid hardwood, without tongue and groove—no hollow noise, no squeaking.



THESE FEATURES MAKE YOU MONEY!

You'll find that BondWood's many advantages are immediately apparent to Home Buyers. Here's a parquet that lets you offer...

UNLIMITED PATTERNS—BondWood can be installed in a variety of patterns—plain, with divider strips, with insets, etc. Available in Oak, Walnut, Maple, Beech, Cherry and other domestic and imported hardwoods.

NO DIRT-CATCHING CRACKS—BondWood units are unbeveled, square-edged, with flush joints—no gaps, no cracks to catch dirt.

THICKER, LONGER WEARING SURFACE—BondWood's wearing surface is 81.8% thicker than laminated block. Gives years of extra life.

BondWood units are 5/16" x 19" x 19", composed of 16 squares, 4¾" x 4¾", consisting of several small slats and held together with paper which is removed during installation.



Send for free brochure today.
See our catalog in Sweets.



HARRIS BondWood®
QUALITY FLOORING SINCE 1898

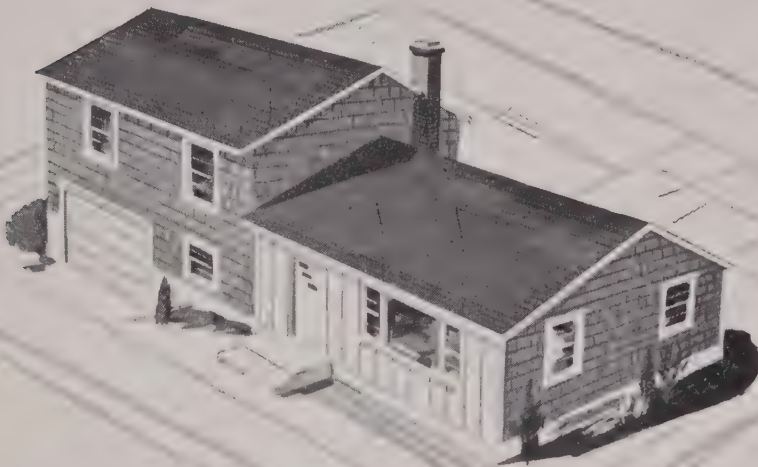
HARRIS MANUFACTURING CO., DEPT. HH-129, JOHNSON CITY, TENN.

Ford STYLE

attracts more buyers...

Ford QUALITY

sells more homes!



When people invest in a home, they're apt to be careful, conservative, and forward looking. They buy with an eye to the comfort, the convenience, the economy of operating and maintaining a home . . . and they think of Re-Sale, too. They ask themselves, "What would it be worth if I had to sell it?"

That's where Ford style, Ford quality mean the most. Ford design combines modern styling with "engineered-in" efficiency of layout, the strength and economy of production manufacturing methods. That adds up for most new home customers . . .

Here's why Ford Homes add up for you, too!

- FORD lays the finish flooring, applies the drywall, does the wiring, applies the trim . . . all in one package!
- Ford quality Homes are ready for decorating 24 hours after delivery . . . lower on-site labor costs for you!
- FORD builds with famous brand name materials, equipment and components throughout; solid brass hardware, thermopane windows, top quality heating units and electrical fixtures assure efficient, trouble-free operation.
- FORD "builds in" re-sale insurance with advanced wiring and outlet installations designed for the appliances and services of today—and tomorrow!
- FORD Homes meet or exceed FHA, VA and conventional mortgage requirements, and are accepted by leading building code authorities.

Quite a deal? You bet! And that's why you can offer more house for the money with FORD! Get your share of the quality market with the complete FORD quality package! For full details, write today on your own letterhead to Dept. HH:

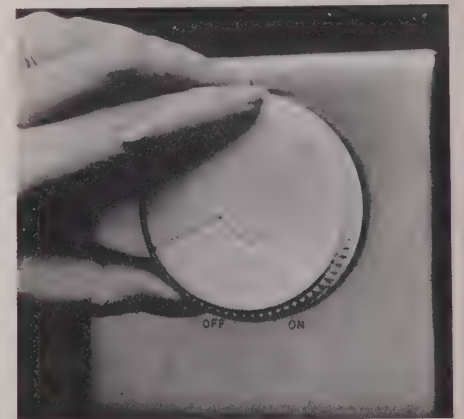
IVON R. **Ford** INC., MC DONOUGH, N. Y.



Lightning arrestor for power lines protects house circuits from excessive voltages. Small aluminum fitting acts as automatic valve, opens under excess voltage to ground the dangerous surge, closes when surge passes. 120/240 unit is installed simply, needs no maintenance.

General Electric, Schenectady.

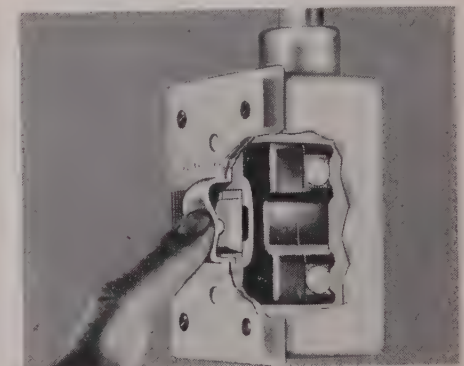
For details, check No. 17 on coupon, p 224



Small dimmer is new from Luxtrol. Unit will control 200 w of incandescent light or five rapid-start fluorescents. 5"x5" wall plate comes in brushed brass, stainless steel, or prime painted. Knobs are ivory, grey, or black. Price: \$18.

Superior Electric, Bristol, Conn.

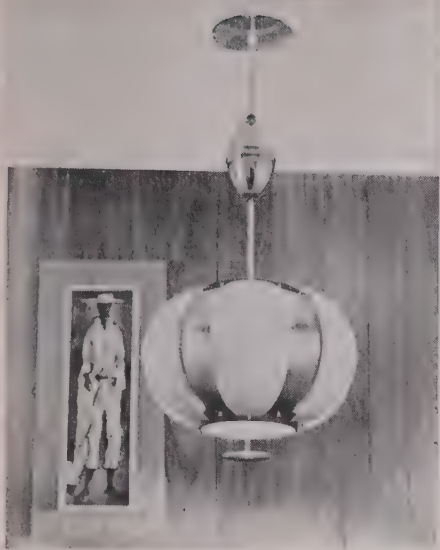
For details, check No. 18 on coupon, p 224



Weatherproof wall plate now adapts Hubbell Pressswitches to outdoor use. Insulprene plate seals the switch completely, yet switch can be operated by pressing raised section. Switches come in 15 or 20 amp, 120-277 v, single or double pole, three or four-way units.

Harvey Hubbell Inc, Bridgeport.

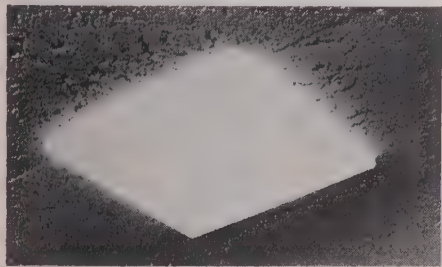
For details, check No. 19 on coupon, p 224



Enchante fixtures from Thomas Industries combine such varied materials as copper, brass, gold, teak, and walnut. Fiesta (above) is pull-down fixture featuring white painted panels over solid copper with a white acrylic diffuser. Twelve new fixtures are being added to Thomas' top residential line.

Thomas Industries, Louisville.

For details, check No. 20 on coupon, p 224



Frameless fixtures for ceiling use have new heat-resistant acrylic diffusers. Advantages claimed include: freedom from corrosion, more illumination from light all around, simple removal for cleaning, low-cost installation. Fixtures 8 $\frac{3}{4}$ " and 12" square come with flanged housings. Third type fits 12"x12" ceiling tile space. All take 100-w or 150-w lamp.

Alkco Mfg Co, Chicago.

For details, check No. 21 on coupon, p 224



Oriental look of new Virden fixtures comes from translucent fiberglass in rattan color. Double bullet shown is 10" long, has 5" back plate, takes two 75-w lamps with individual switches. Line also includes reel-type pull-down for three 60-w lamps, extendable three-lamp wall fixture, and a single 75-w bullet.

John C. Virden Co, Cleveland.

For details, check No. 22 on coupon, p 224

continued on p 220

NEW *Leigh* RANGE HOODS



No. 5400 Series — available in 30, 36 and 42 inch widths

Only the new LEIGH No. 5400 Series RANGE HOODS feature such beautiful styling . . . to complement the very finest of homes . . . yet perfectly priced for budget kitchens!

- **LOW COST** — priced far below all competitive Range Hoods
- **QUALITY CONSTRUCTION** — made of the finest materials, by experienced craftsmen — engineered to provide a house-time of dependable service.
- **DECORATOR STYLING** — to conform with any kitchen interior — features a rich, copper-tone finish.

Ask for Bulletin 264-L

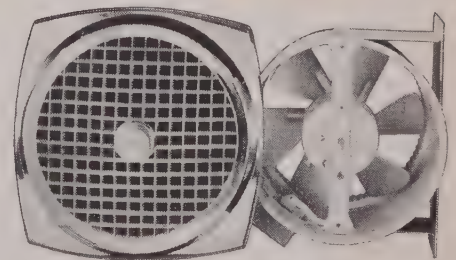
SAVE YOU

\$13⁰⁰

to

\$16⁰⁰

NEW *Leigh* VENTILATING FAN



NO. 5508 FAN

SAVES YOU

\$5⁰⁰ to \$6⁰⁰

- Fits 8" pipe without additional cost of an adapter
- Easily installed without framing
- Lifetime mirror-like plated grille of high impact Polystyrene
- Powerful, completely-enclosed motor

Ask for Bulletin No. 266-L

Leigh

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HIP Show '60



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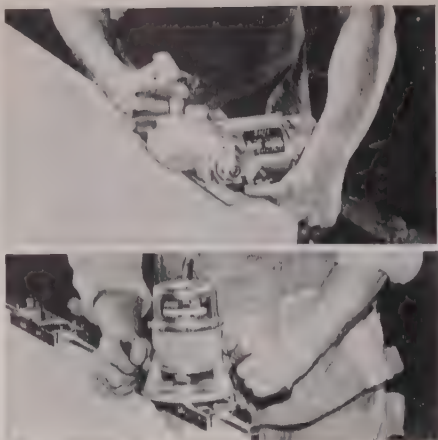
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FEBRUARY 5, 6, 7, 1960 / NAVY PIER, CHICAGO



New products

start on p 209



Tool combination from Skil can be used as a high-speed plane (top) or a router (bottom). Plane has a 16" shoe with chip deflector, depth-control gauge, and micrometer level. Router can make all groove, dado, bead, rabbet, mortise, and cove cuts. Motor, plane, and router have list prices of \$45, \$44.50, and \$14.50.

Skil Corp, Chicago.

For details, check No. 23 on coupon, p 224



New trench saw cuts a 1" wide trench to shallow depths for tubing, conduit, and small pipe for gas, electricity, water, and telephone service. Trench does minimal damage to lawns, can be back-filled with a garden rake. Two-cycle chain-saw engine can be detached and used with chain saw. 70-lb weight allows one-man use.

Auburn Machine Works, Auburn, Neb.

For details, check No. 24 on coupon, p 224



Sculptured grille of lightweight Tenite butyrate plastic looks like white stone. Material can be worked with hand tools and needs no structural reinforcement. Sculpta-Grille comes in 1/2' multiples in a variety of designs and colors.

Harvey Designs, Lynbrook, N.Y.

For details, check No. 25 on coupon, p 224

color scheme

originals

By Lee Childress

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For

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MANUFACTURERS

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INTERIOR DESIGNERS

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☐ Manufacturers
☐ Architects
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Name _____

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New products

start on p 209



Swedish casement is an optional element in modular system imported by ASA Homes. Wood-framed casement holds four glass panes which fold to make two double-glazed lights, open for easy cleaning. As double pane, window opens 90°. Window comes installed in 4'x8' wall panel.

ASA Homes, New York City.

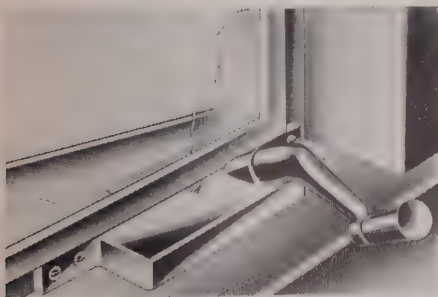
For details, check No. 26 on coupon, p 224



ThermaLume doors will take 7/32" sheet glass, 1/4" polished plate, or 5/8" insulating glass simply by changing vinyl glazing bead. Moving panel is on outside to give better weatherseal at track, corners, and interlock. Alumilite finish is satin silver or amber; handles are satin, champagne, ebony, or copper. Doors come 6'9" or 7'11" high, 6' to 24' wide.

Shower Door Co of America, Atlanta.

For details, check No. 27 on coupon, p 224



Casement operator from Yale & Towne is designed to cut inventories, can be installed in wood or metal casements in screened or unscreened applications on windows with butt or extension hinges. Construction is rust resistant with aluminum or bronze baked-enamel finish. Operator secures against forced opening.

Yale & Towne, White Plains, N.Y.

For details, check No. 28 on coupon, p 224

Publications start on p 222



Manufactured Closet Front Saves Money— Adds Quality

When you buy manufactured homes, specify Float-Away closet doors. Float-Away closet doors are a complete "closet front" extending from floor to ceiling and side wall to side wall. Home buyers like the way the whole closet front opens up, allowing full access to the entire closet area and extra storage space. Builders and home manufacturers like the fact that Float-Away closet doors save money—*more than one-third the cost of every closet front*. These manufactured closet fronts come in a package complete with all trim, oak threshold and necessary hardware included. Float-Away doors are easy to install and being metal, present no maintenance problems. Please your customers and your pocketbook, specify Float-Away closet doors.

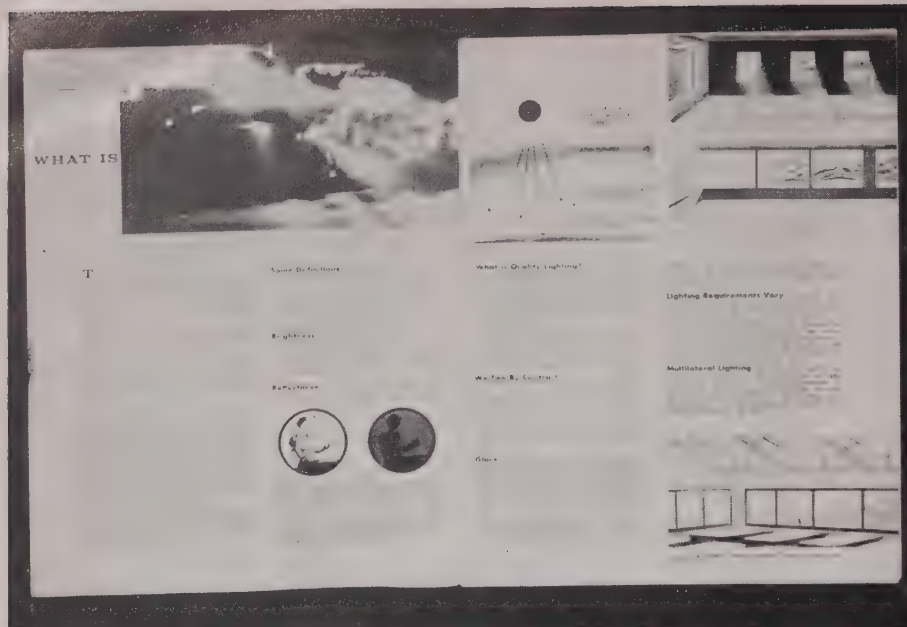


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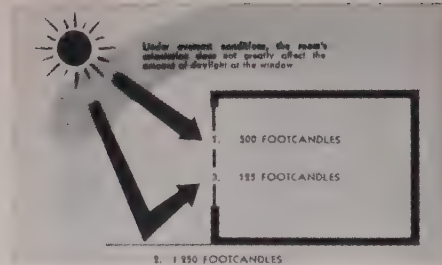
FLOAT-AWAY DOOR CO.

1173 Zonolite Road, N. E.
Atlanta 6, Georgia

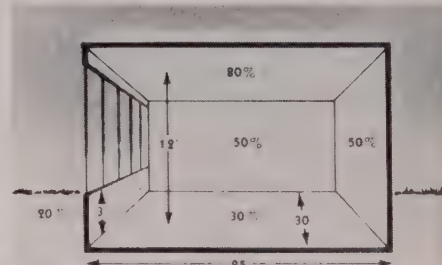




INTRODUCTION spells out the elements that make up natural light.



LIGHT SOURCES may include direct and reflected sky light, reflected ground light.



ROOM CONDITIONS vary with window size, room size, wall, ceiling, floor reflectance.

How to predict daylighting

Libbey-Owens-Ford has put together a 28-page description of a new way to determine the brightness and quality of the daylight at the work surface in any part of a room. This report sums up ten years of research by Southern Methodist University.

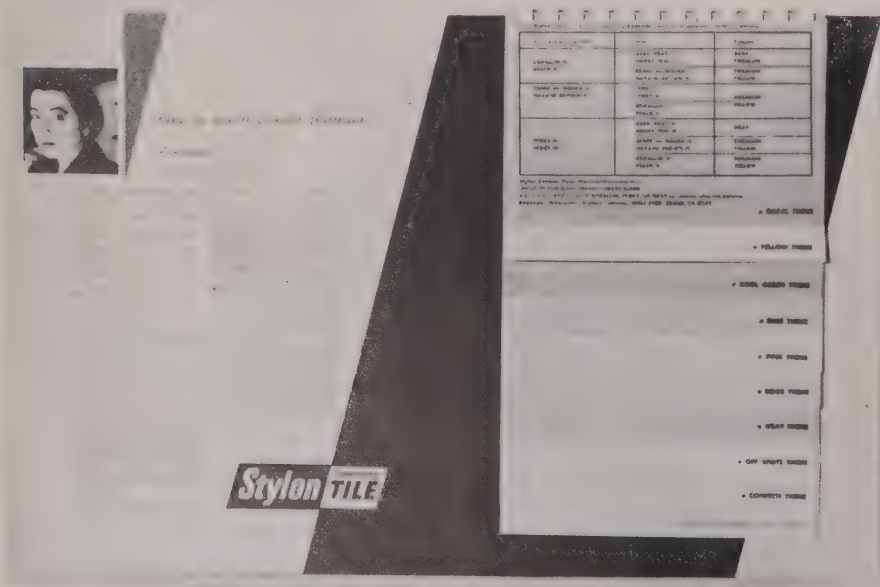
The new method takes into consideration the available light, the physical conditions of the room and adjacent areas, window areas, and two numerical factors; sums them up in a formula to predict work plane illumination.

The L-O-F booklet explains the

method fully, gives nine examples of how the formula works for nine different rooms and light conditions. The numerical factors are given in four pages of tables and graphs.

Libbey-Owens-Ford, Toledo.

For copy, check No. 29 on coupon, p 224



How to plan for color

Lee Childress' new Stylon Color Planner has made it easier for you to pick ceramic tile colors. Stylon's wide collection of colors has been boiled down to nine basic themes: coral, yellow, cool green, blue, pink, beige, gray, off white, and confetti. For each theme, Miss Childress has chosen floor tile,

wall tile, trim, and fixtures in Stylon and Redondo colors.

For model home use, the Planner can be supplemented with Stylon's new compact displays which are available to any builder using Stylon tile.

Stylon Corp, Milford, Mass.

For copy, check No. 30 on coupon, p 224

Who has what plywood?

Hardwood Plywood Institute has issued a complete directory of its members which lists the firms and their management personnel, tells their annual capacity, largest sheet sizes, glue types, types of equipment used, species manufactured, specialty items stocked. Includes over 50 manufacturers.

Hardwood Plywood Institute, Arlington, Va.

For copy, check No. 31 on coupon, p 224

Full lock line in color

In Challenger Lock's catalog for 1960 all knob and escutcheon designs are shown in color. Construction of all three Challenger series is shown in cut-away drawings, specifications for all series are included.

Challenger Lock, Anaheim, Calif.

For copy, check No. 32 on coupon, p 224

"Small Plant Sewage Treatment"

Four pieces of Dorr-Oliver equipment to provide clarification and sludge digestion in a single tank are described in a new bulletin. The equipment: Clarigester, Degritting Clarigester, Duo-Clarigester, and CompleTreator. Line drawings, flow sheets, and photographs of typical uses are included.

Dorr-Oliver, Stamford, Conn.

For copy, check No. 33 on coupon, p 224

Homasote panel system

How Homasote's Precision-Built system of house components works is described in a new 8-page, two-color booklet. This system offers local builders and dealers the benefits of prefabrication on either a mass or custom-house basis. Panels include floor elements (complete with finish flooring), house-size wall panels and room-size partitions (sheets come as big as 8'x14'), ceiling and roof panels, and gable ends. Prefabrication on any house can be carried to the degree of finish desired. System meets standards for FHA-VA or conventional financing.

Homasote Co, Trenton.

For copy, check No. 34 on coupon, p 224

How to insulate a roof deck

A new 32-page booklet from Celotex spells out the advantages of above-deck roof insulation. Design data for eight types of flat roof include costs and U factors for various deck and insulation combinations, simplified specification practices. Tables give insulation values, reductions in heat gain and loss, winter and summer under-roof temperatures, fuel savings, permissible relative humidities. Booklet also shows sample specification forms.

Celotex, Chicago.

For copy, check No. 35 on coupon, p 224

Insulating for electric heat

Baldwin-Ehret-Hill tells the story of electric heat in terms of rock-wool insulation in a new 7-page foldout. The booklet defines the various types of electric heat and points out their advantages but the heart of the matter is three pages of detailed insulation specifications for all parts of the house.

Baldwin-Ehret-Hill, Trenton.

For copy, check No. 36 on coupon, p 224

Kitchen idea book

Thermador has a new four-color booklet of fine kitchens using the company's built-in appliances. Kitchen planning is broken down into function, space, color, equipment, the hidden problems. Four sheets of modular paper help you plan custom layouts. Price 50¢.

Thermador Electrical Mfg Co, 5119 District Blvd, Los Angeles 22.

For copy, write direct to manufacturer.

1960 plumbing fixtures

Gerber's complete line is shown in a 96-page catalog just released. Vitreous china and steel enamelware are shown in photos with full dimensions and technical features. All-brass fixtures are shown in exploded drawings. Complete bathrooms can be ordered as a package without itemizing.

Gerber Plumbing Fixtures, Chicago.

For copy, check No. 37 on coupon, p 224

Planning basements

A variety of ideas for using basement space are given in a new brochure from Williams Oil-O-Matic. Among the ideas shown: a basement workshop, outside greenhouse, basement fireplace, economical smoke hood. Heating and cooling are, of course, featured. Copies are 25¢ apiece.

Williams Oil-O-Matic, Columbus.

For copy, write direct to manufacturer.

continued on p 224

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Light fixtures by Heifetz

New Rotaflex line is featured in a new catalog from Heifetz Design Gallery. This contemporary line features plastic globes in white and several solid and candy-striped colors. Fittings are solid brass, oiled walnut, and white enamel. Groupings include three- to seven-light pendants and single-lamp pull downs.

Heifetz Co, Clinton, Conn.

For copy, check No. 38 on coupon below

Low-voltage wiring

Remcon has a new electrician's manual on how to wire for low voltage. It explains the basic concept of low voltage, tells how to plan, how to install, and how to check a Remcon system. The 20-page booklet is pocketsize.

Remcon, Lynbrook, N.Y.

For copy, check No. 39 on coupon below

Film on sewerage

Smith & Loveless have a new motion picture to show and explain factory-built sewage lift stations for suburban housing use. The film shows what S&L equipment is, how it is made, how it is installed.

Smith & Loveless, Lenexa, Kan.

For showing, write direct to manufacturer.

How to shade a window

Owens-Corning has put together a booklet of design data on "Fenestration Fabrics" that specifies what materials to use and how to use them to cut down light, heat, glare, and noise. The booklet outlines what properties do the best job and which fabrics have which properties.

Owens-Corning, New York City.

For copy, check No. 40 on coupon below

Want more information?

The numbers below are keyed to the items described on the New Products and Publications pages. Check the ones that interest you and mail the coupon to:

House & Home

Room 1021A, 9 Rockefeller Plaza, New York 20, N.Y.

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1. ☐ Eljer Fiesta toilet
2. ☐ Design-Tex shower stall
3. ☐ Viking humidifier
4. ☐ Handley-Brown meter box
5. ☐ CMC Calsi-Crete house
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7. ☐ Elkay stainless sinks
8. ☐ Weyerhaeuser underlayment
9. ☐ GMC trucks
10. ☐ Westinghouse heater
11. ☐ Berko electric baseboard
12. ☐ Electro-Ray electric baseboard
13. ☐ Walker Uni-Pak circuit breakers
14. ☐ Lau central ventilator
15. ☐ Leigh low-cost vent fan
16. ☐ Stiglitz gas dryers
17. ☐ GE lightning arrester
18. ☐ Luxtrol small light control
19. ☐ Hubbell weatherproof wall plate
20. ☐ Thomas Enchante fixtures
21. ☐ Alkco frameless fixtures
22. ☐ Virden oriental fixtures
23. ☐ Skill router-plane
24. ☐ Auburn trench saw
25. ☐ Harvey Sculpta-Grille
26. ☐ ASA casement window
27. ☐ Shower Door Co ThermaLume door
28. ☐ Yale & Towne casement operator

PUBLICATIONS

29. ☐ L-O-F daylight prediction method
30. ☐ Stylon Color Planner
31. ☐ Hardwood Plywood directory
32. ☐ Challenger Lock's catalog
33. ☐ Dorr-Oliver sewage plant
34. ☐ Homasote panel system
35. ☐ Celotex roof-deck insulation
36. ☐ B-E-H electric-heat insulation
37. ☐ Gerber plumbing fixtures
38. ☐ Heifetz Rotaflex light fixtures
39. ☐ Remcon manual on low-voltage wiring
40. ☐ Owens-Corning window shading

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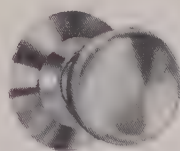
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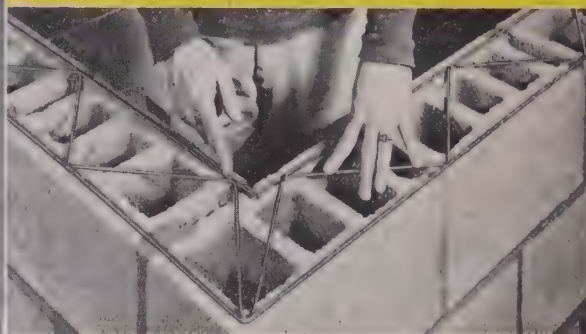
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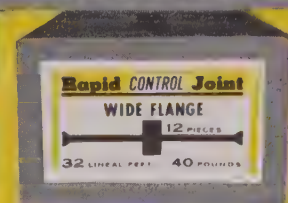
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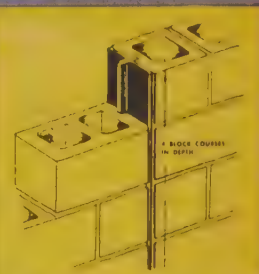


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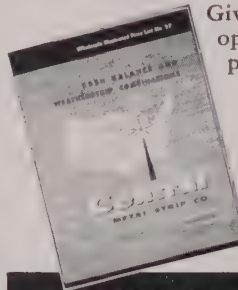
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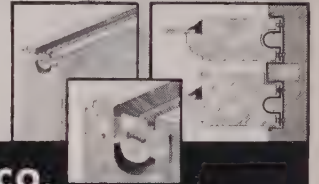
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We are proud to present Herman York's 1960 Ceramic Tile Idea Kitchen Design—and some of his ideas of how Ceramic Tile lends itself to producing highly saleable homes.

We hope these fully developed plans—created by an acknowledged leader in the design of fine tract homes—will give you ideas for appealing to the important quality-conscious home buyer and remodeler.

TILE COUNCIL OF AMERICA, INC.

1960

CERAMIC TILE IDEA KITCHEN

created by HERMAN YORK, A.I.A.



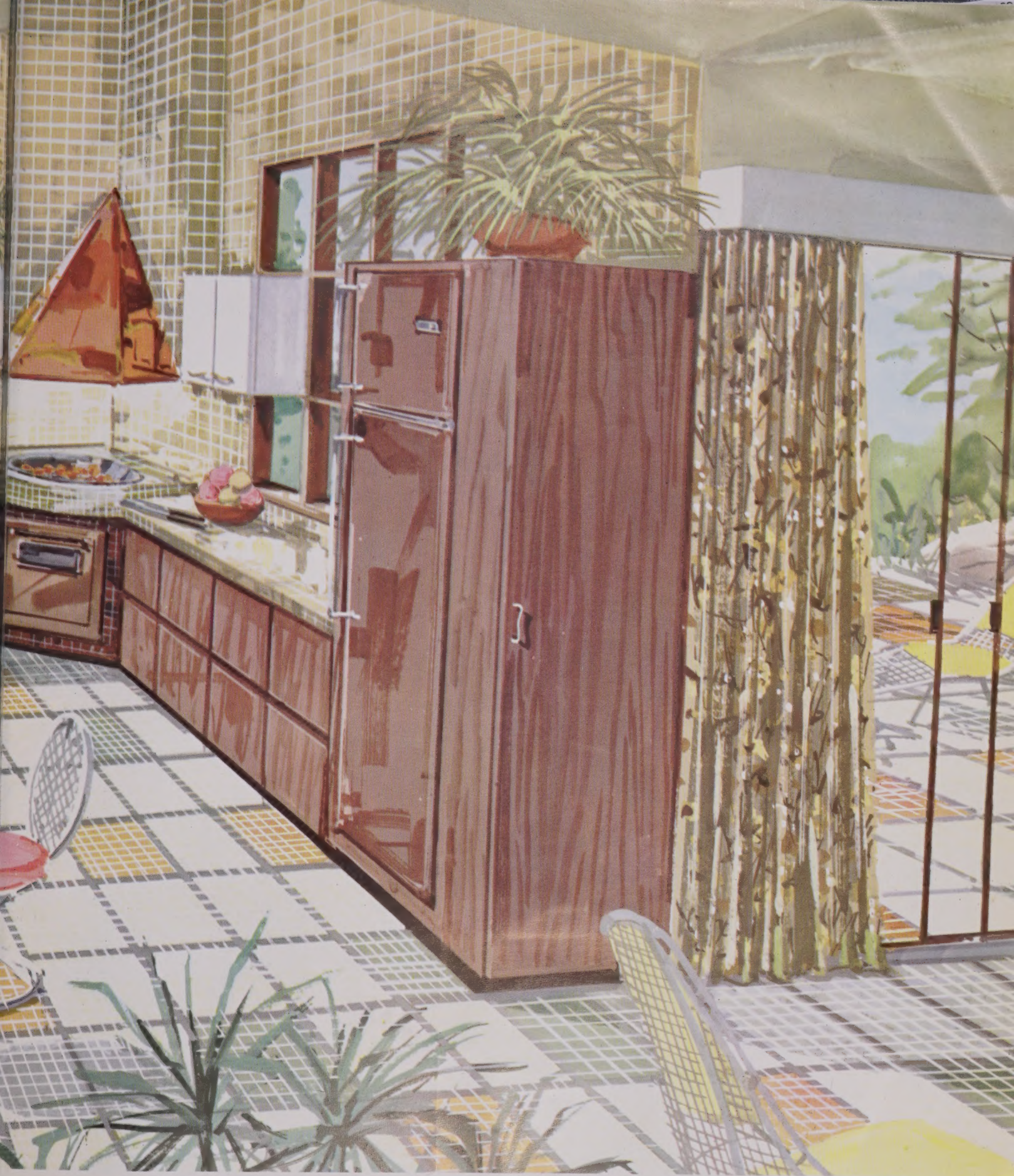


the magic of
CERAMIC TILE...

inspired Herman York, A.I.A., to create this charming, workable 1960 Idea Kitchen. He used it with high style as a

surfacing for the walls, floor, countertops and drainboard. Herman York's choice of Ceramic Tile, with its unique styling, practical nature and its lasting value, speaks for his belief in quality materials for quality homes.

Ceramic Tile is the first choice for today's smartest home. It has built-in, lasting beauty, and fired-in colors which reflect the realistic thought that homes must be decorative as well as carefree.



re's why Ceramic Tile will appeal to sales prospects:

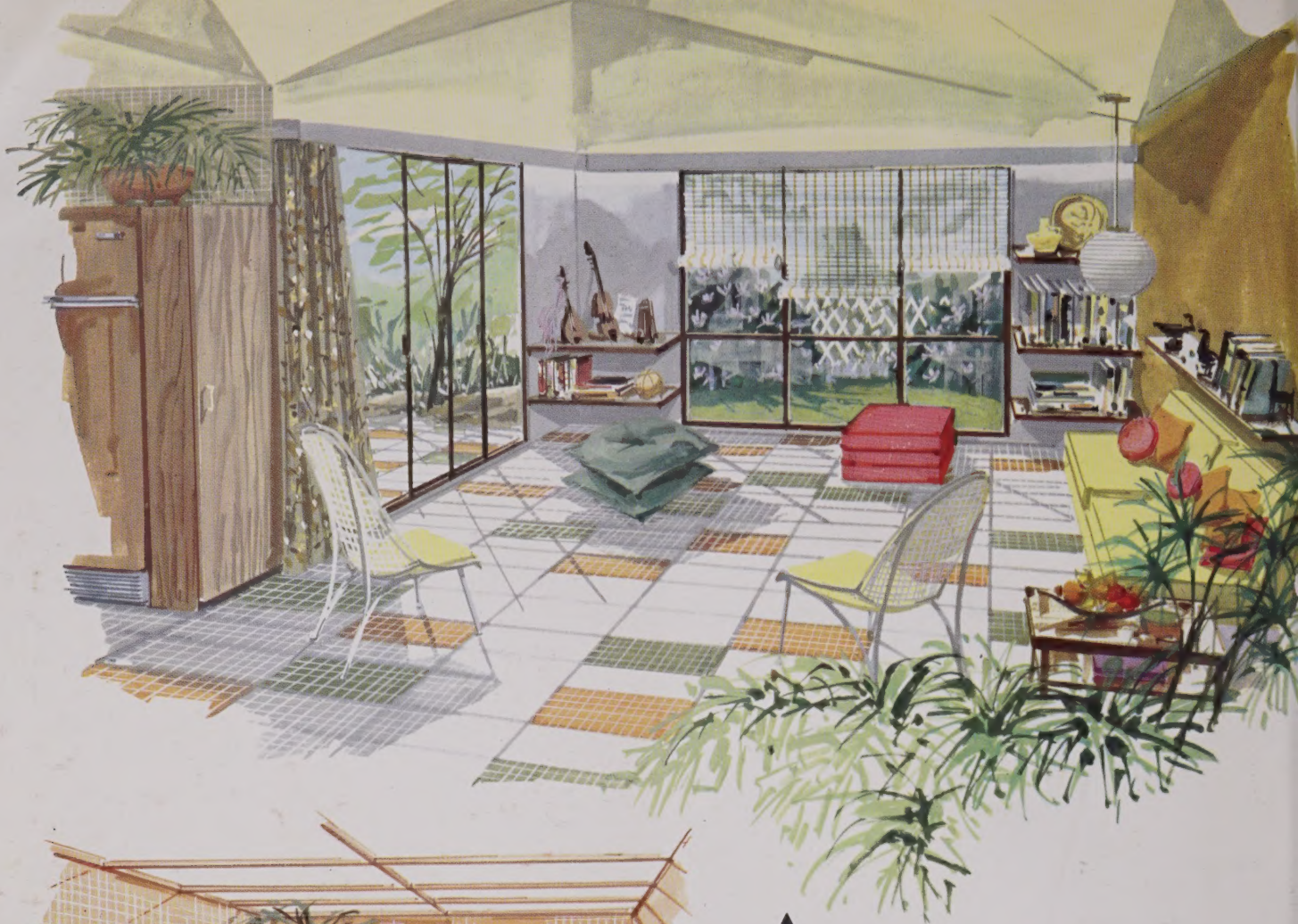
- S WATERPROOF—water and dampness won't buckle or warp it.
- S FIREPROOF—fire, smoke and grease won't harm it.
- S DENTPROOF—heavy use, rough wear can't mar it.
- S STAINPROOF—highly resistant to household stains.
- S SCARPROOF—cutting can't scratch it.

These multiple benefits make Ceramic Tile the biggest boon to modern living. Beautiful and rugged, it's suitable for any room; it teams up with any contrasting material.

Homeowners everywhere are presold on Ceramic Tile. It has quick-selling, built-in "buy appeal" for any of your remodeling or new construction projects.

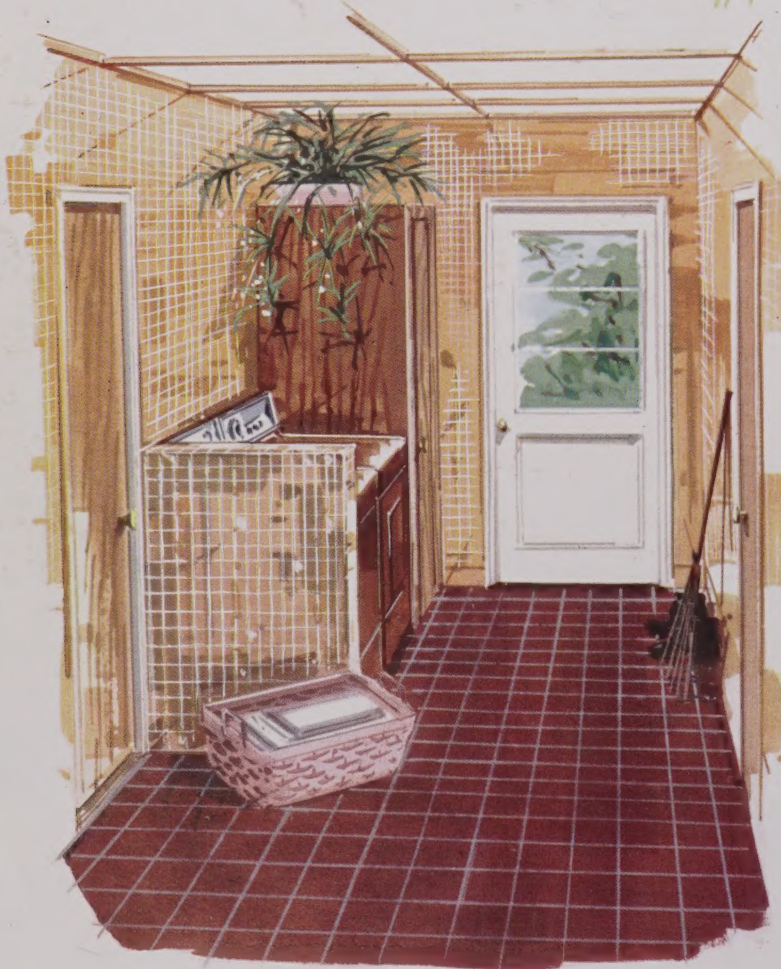
Plans for Herman York's 1960 Idea Kitchen FREE to builders.

(See Back Cover for address.)



▲ Herman York created this lovely tiled family room as an adjoining area to show some of the imaginative possibilities of colorful, durable Ceramic Tile. The modern, clean look of tile produces dramatic results.

It's decorative with traditional or modern furnishings, and there's an amazing variety of colors and patterns to choose from. Ceramic Tile is the permanent surfacing that stays alive with use.



◀ *Beauty Underfoot* is effectively illustrated here by Herman York's design for the "mud" room located just off his Idea Kitchen. Easy maintenance makes Ceramic Tile really carefree. There's never any expensive replacement costs—Ceramic Tile keeps new looking for the life of the home.

See your local tile contractor for complete information on new, low-cost installation methods.

**PLANS FOR HERMAN YORK'S 1960
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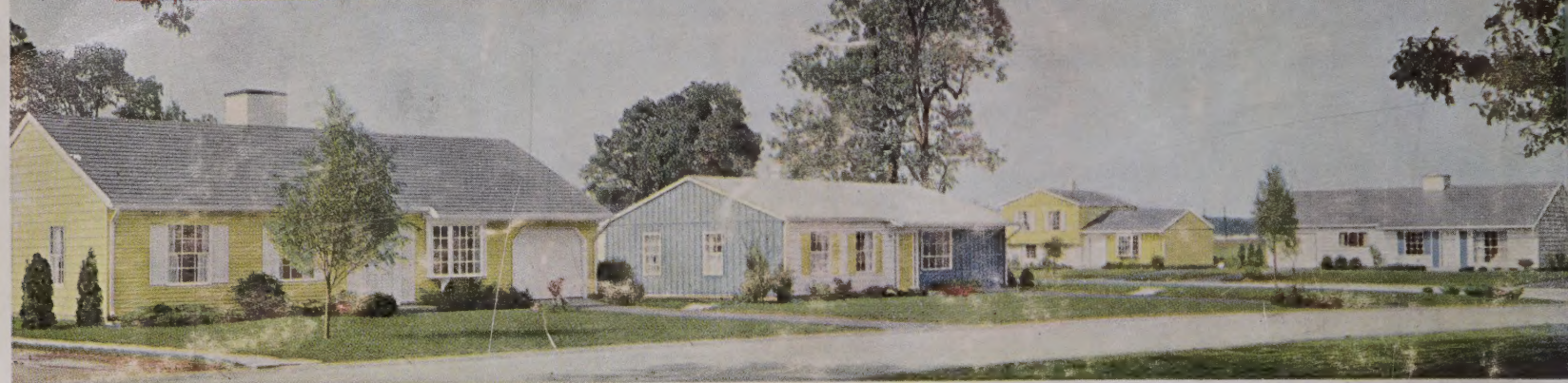
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was an aluminum home; although here, as in the other areas, a choice of sidings was available.

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